TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. 197.

EILERT SCHUMACHER & WILLIAM JOHNSON, APPELLANTS,

vs.

GEORGE B. CORNELL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF WISCONSIN.

FILED OCTOBER 12, 1875.

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1 **Circuit court of the United States of America for the eastern district of Wisconsin.**

UNITED STATES OF AMERICA,
Eastern District of Wisconsin, ss:

At a stated term of the circuit court of the United States of America for the eastern district of Wisconsin, begun and held according to law, at the city of Milwaukee, in said district, on the first Monday (being the fifth day) of October, A. D. 1874—present and presiding the honorable Thomas Drummond, circuit judge—

Among other the following proceedings were had, to wit:

GEORGE B. CORNELL, COMPLAINANT,
vs.
EILERT SCHUMACKER & WILLIAM JOHNSON, defendants. } In equity.

Be it remembered that heretofore, to wit, on the ninth day of December, A. D. 1872, came the above-named complainant, George B. Cornell, by his solicitors, Mess'rs West & Bond, and filed his bill of complaint against the above-named defendants, as follows:

2 *Bill of complaint.*

United States circuit court, eastern district of Wisconsin.

To the honorable the judges of the circuit court of the United States for the eastern district of Wisconsin in chancery sitting:

George B. Cornell, of Chicago, Illinois, and a citizen of said State, brings this his bill of complaint against William Johnson and Eilert Schumacker, residing in Milwaukee, in the State of Wisconsin, and citizens of said State of Wisconsin.

And thereupon your orator complains and says that, before the twenty-ninth day of August, eighteen hundred and seventy-one, John Lacey and said George B. Cornell were the true, original, and first inventors of a certain new and useful combined bush-wrench and bung, not known and used by others before their said invention thereof, and which had not, at the time of their application for a patent theretor, been in public use or on sale with their consent or allowance, as your orator verily believes.

And your orator further shows unto your honors that said Lacey and your orator, so being the inventors of said improvement, and being citizens of the United States aforesaid, made application to the proper department of the Government of the United States for letters-patent therefor in accordance with the then existing laws of Congress,
3 and they having duly complied, in all respects, with the conditions and requisitions of said laws, such proceedings were had, that on the 29th day of August, eighteen hundred and seventy-one, letters-patent of the United States for the said improvement and invention, under the seal of the Patent-Office of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and bearing date the day and year last aforesaid, were issued in due form of law and delivered to your orator, the said Lacey having assigned his interest in said invention to your orator, whereby was granted and secured to your orator and his heirs, executors, adminis-

trators, or assigns, for the term of seventeen years from the day of the date thereof, the full and exclusive right of making, using, and vending to others to be used, the said improvement and invention, a description whereof is given, in the words of the said inventors, in a schedule in writing, accompanied by drawings and references thereto, duly annexed to said letters-patent when the same were issued and made a part thereof, as by the said original letters-patent or a duly authenticated copy thereof, in court to be produced will fully appear.

And your orator further shows unto your honors that afterwards he for good and lawful cause surrendered said last-mentioned letters-
4 patent to the Commissioner of Patents, and duly made application for two new patents to be issued for the same invention, and accompanied such application with a corrected descriptions and specifications and with the requisite drawings, and in all respects complied with the acts of Congress in such case made and provided; whereupon, on the sixth day of August, eighteen hundred and seventy-two, two new letters-patent, each for a distinct and separate part of the thing patented, and part of the same invention last mentioned were, in accordance with law, duly granted, issued, and delivered to your orator for the residue of said term of seventeen years; that said last-mentioned letters-patent were each issued in accordance with and in due form of law, under the seal of the Patent-Office of the United States, signed by the Acting Secretary of the Interior and countersigned by the Commissioner of Patents, and bear date the day and year last aforesaid, and were severally designated as re-issue No. 5026 and No. 5027, the former being for the wrench described in the original patent, and that there was by each of said re-issued letters-patent secured to your orator and to his heirs, executors, administrators, and assigns, for the term of seventeen years from the 29th day of August, eighteen hundred and seventy-one, the full and exclusive right of making, using, and vending to others to be
5 used, that part of the said original improvement and invention described and claimed in each of the said re-issued patents; that a legal corrected description and specification of that part of said original improvement and invention contained in each of said re-issued letters-patent is given in the words of the said John Lacey and your orator in a certain schedule, accompanied by drawings and written references thereto, which was in due form of law annexed to each of said re-issued letters-patent at the time the same were issued and made a part thereof, as by the said last-mentioned original re-issued letters-patent or duly authenticated copies thereof to be produced, as the court shall direct, will fully appear, a copy of which patent No. 5026, without the drawings, is hereto annexed forming part of this bill, marked "Exhibit A."

And your orator further shows unto your honors that the said improvement and invention, patented as aforesaid, has hitherto been in the exclusive possession of your orator or his assignees or licensees, and has hitherto been and still is of great value and profit to your orator and to the public, and that he has introduced the same into use extensively, and is still engaged in so doing; and the public generally have acquiesced in the validity of said re-issued patents, and but for the in-
6 fringement hereinafter complained of your orator would now be in the undisturbed possession and enjoyment of the exclusive privileges secured by said re-issued letters-patent.

Yet the said defendants, as your orator is informed and believes, well knowing the premis', but contriving to injure your orator, and without his consent or allowance, and without right and in violation of your orator's said rights, have, within said State of Wisconsin and within

said district of Wisconsin, and during the term of said re-issued letters-patent No. 5026, made, used, and vended, and are still making, using, and vending to others to be used, large numbers of wrenches, but how many your orator cannot state, but prays that the defendants may discover and set forth the number containing substantially the improvement and invention, or a material and substantial part thereof, set forth and patented in and by said re-issued letters patent No. 5026, and thereby the said defendants have infringed, and still do infringe, and your orator fears that in future they will infringe upon the exclusive rights and privileges secured to your orator as aforesaid.

And your orator says that he has sustained damages by reason of said infringement in the sum of dollars.

To the end, therefore, that the said defendants may, if they can,
7 show why your orator should not have the relief herein prayed, and may, but not on oath, (answer on oath being hereby expressly waived,) and according to the best of their knowledge, remembrance, information, and belief, full, true, direct, and perfect answer make to all and singular the premises, and that they may be decreed to account for and pay over to your orator all gains and profits realized by them from the unlawful making, using, or vending the improvement vested in your orator as aforesaid, and the damages which your orator has sustained thereby; and that the defendants may be perpetually restrained by an injunction to be issued out of this honorable court from making, using, or vending any wrench containing the improvement and invention secured as aforesaid to your orator by said patent re-issue No. 5026, or any material part thereof; and that your orator may have such other or further relief as equity may require.

May it please your honors to grant unto your orator not only a writ of injunction conformable to the prayer of this bill, but also a writ of subpœna directed to the defendants, William Johnson and Eilert Schumacker, and commanding them, at a certain time and under a certain penalty, to appear before your honors in this court, then and there to
8 answer unto this bill of complaint, and to abide by and perform such decree as the court may make in the premises; and your orator will ever pray, &c.

G. B. CORNELL.

WEST & BOND,
Solicitors and of Counsel for Complainant.

UNITED STATES OF AMERICA,
Northern District of Illinois, ss:

George B. Cornell, the complainant in the foregoing bill named, being duly sworn, says that he has heard read the foregoing bill and knows the contents thereof, and that the statements therein contained, so far as they are within his own knowledge, are true, and so far as they are derived from the information of others he believes them to be true.

And he further says that he verily believes that John Lacey and himself, in said bill named, were the original, true, and first inventors of the new and useful combined bush and wrench for bungs, described in the original letters-patent granted to them and issued to said Cornell, and also of the several parts thereof, described and claimed in the two re-issued patents mentioned in the foregoing bill, as therein set forth.

And deponent further says that he, the complainant, is the owner of said letters-patent re-issue No. 5026, as set forth in said bill.

G. B. CORNELL.

Subscribed and sworn to before me this seventh day of December, A. D. 1872.

9 [SEAL.] O. W. BOND,
Notary Public in and for the City of Chicago, County of Cook, State of Illinois.

EXHIBIT A.

John Lacey and George B. Cornell, of Chicago, Illinois. Said Lacey assignor to G. B. Cornell. Improvement in wrenches for extracting bung-bushes. Specification forming part of letters-patent No. 118617, dated August 29th, 1871. Re-issue No. 5026, dated August 6th, 1872. Division A.

To all whom it may concern:

Be it known that we, John Lacey and George B. Cornell, of Chicago, in the county of Cook and State of Illinois, have invented an improved wrench for securing metallic bushing in casks or barrels; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, which Figure 1 is a bottom view of a wrench embodying the said improvement, and Fig. 2 is a longitudinal central section of the same taken on the line *d d* drawn through Fig. 1. Similar letters of reference indicate like parts in both figures of the drawing.

10 The present invention relates to a wrench employed in securing a metallic bung-bushing within the aperture of casks, barrels, &c.; and the improvement consists in providing the shank of the wrench with a cylindrical core so arranged as to closely fit the aperture in the bushing, and a V-shaped projection adapted to fit a corresponding notch formed in the bushing, whereby the same may be turned into place without assuming an oblique position within the bung-opening, and also preventing the wrench from slipping from its seat. All of which will be more fully understood by the following description:

In the drawings A represents the shank of the wrench, which consists of a plain metal bar of the requisite length. Attached to one end of this bar is a flat metal plate, B, which is provided at its center with an elongated mortise, C, as shown in Fig. 1. This shank is so formed at its junction with the plate as to provide a V-shaped projection, D, the point of which extends forward toward the centre of the plate. E represents a cylindrical cast-metal core, which is made tapering, and so arranged as to fit the aperture in the bushing. This core is made separate from the plate, and is attached thereto by means of a bolt,

11 F, which passes through the mortise formed in the plate, as shown in Fig. 2. The arrangement of this core is such as to admit of being removed from the bolt by removing the nut *e*, the object of which is to allow a core of greater diameter to be substituted when used in bushings of large size, provision being made for the elongation of the mortise in the plate for the moving of the bolt toward or from the projection D, which becomes necessary when cores of different sizes are used. In using the said invention the core is inserted into the opening through the bushing, and turned until projection D falls into a notch formed in the bushing which is adapted to fit the same; and by means of the core the bushing is kept steady and prevented from assuming an oblique position in the bung-opening while being turned into place, and

by the contact of the projection within the notch the wrench is prevented from slipping from its seat, thereby enabling the bushing to be readily turned into place.

We do not wish to confine ourselves exclusively to the V-shaped projection, as any form that will prevent the core from turning independent of the bushing will produce the same result.

12 Having thus described the said invention, we claim: The wrench herein described, consisting of a shank, A, plate, B, projection, D, and core, E, the said core adapted to fit the opening through the bushing, whereby the same is prevented from assuming an oblique position when being turned into place, substantially as described.

JOHN LACEY.
GEO. B. CORNELL.

Witnesses:
WILLIAM EDGAR.
J. W. MERRIAM.

Rule for injunction.

And same day (December 9, 1872) entered in the order and rule book an order that the defendants show cause by Tuesday, the seventeenth day of December instant, at two o'clock in the afternoon, why an injunction should not be issued according to the prayer of the bill on file.

Whereupon a subpœna issued, returnable the first Monday of January next, as follows:

Subpœna.

UNITED STATES OF AMERICA,
Eastern District of Wisconsin, ss:

The President of the United States of America to Eilert Shumacher and [SEAL.] William Johnson, greeting:

13 You are hereby commanded that you personally appear before the judges of the circuit court of the United States of America for the eastern district of Wisconsin, in our court of chancery in and for the district aforesaid, on the first Monday of January next ensuing, at Milwaukee, to answer to a bill of complaint exhibited against you in our said court by George B. Cornell, and to do further and receive what our said court shall have considered in that behalf; and this you are not to omit under the penalty which may ensue.

This process of subpœna is directed to the marshal of this district, who is hereby commanded to serve the same upon the said Eilert Schumacher and William Johnson, if to be found in his district, and due return thereof make.

Witness the honorable Salmon P. Chase, Chief-Justice of the Supreme Court of the United States, at the city of Milwaukee, in the said district, this ninth day of December, in the year of our Lord one thousand eight hundred and seventy-two, and of our Independence the ninety-seventh.

EDWARD KURTZ, *Clerk.*

WEST & BOND, *Solicitors.*

It is ordered by our said court that the said Eilert Schumacher and William Johnson, the defendants aforesaid, do enter their appearance in this suit in the clerk's office on or before the day and time at which this subpœna is returnable as aforesaid; otherwise the bill filed

14 may be taken as confessed. And it is further ordered that they show cause by Tuesday, the seventeenth day of December in-

stant, at two o'clock in the afternoon, why an injunction should not be issued according to the prayer of the bill on file.

Return.

Subpœna returned. Served on the within-named Eilert Schumacher and William Johnson by delivering to each of them personally a copy of this subpœna this 10th day of December, 1872.

C. S. HAMILTON, *Marshal*,
By C. H. HAMILTON, *Deputy*.

Fees $4.92.

DECEMBER 17, 1872.—This day came the defendants, by their solicitors, Mess'rs Finches, Lynde & Miller, and filed their answer, as follows:

Answer.

United States circuit court for the eastern district of Wisconsin.

The joint and several answer of William Johnson and Eilert Schumacker, the defendants, to the bill of complaint of George B. Cornell, complainant.

These defendants, now and at all times saving and reserving to themselves all manner of benefit and advantage of exception to the many errors and insufficiencies in the complainant's said bill of com-
15 plaint contained, for answer thereunto, or unto so much or such parts thereof as these defendants are advised is material for them to make answer unto, they answering say that they are informed and believe, and upon such information & belief deny that said complainant and one John Lacey, before the 29th day of August, 1871, or subsequent thereto, were the true, original, & first inventors of the combined bush-wrench & bung, so called.

And these defendants, further severally answering, say that they know not and have not been informed, save by the said complainant's bill of complaint, and cannot set forth as to their belief or otherwise, whether he, the said complainant, and the said Lacey applied to the proper department of the Government of the United States for letters-patent upon said supposed invention at the time and manner and in form as mentioned and set forth in their bill of complaint, and therefore they leave said complainant to make his proof thereof.

And these defendants, further severally answering, say that they know not and have not been informed, save by the complainant's said bill of complaint, and cannot set forth as to their belief or otherwise, whether letters-patent were issued to said Lacey & complainant in man-
16 ner & form as mentioned and set forth in said bill of complaint, and therefore they leave him to make his proof thereof.

And these defendants, further severally answering, say that they know not and have not been informed, save by the complainant's said bill of complaint, and cannot set forth as to their several and separate belief or otherwise, whether said complainant surrendered said letters-patent, and that two new letters-patent were issued in lieu thereof in manner and form and for the purposes specified, as mentioned and set forth in said bill of complaint; they therefore leave said complainant to make his proofs thereupon.

And these defendants, further severally answering, deny that said patent or patents, or any of them, claimed by said complainant to have been granted in manner and form as set forth in his said bill of complaint, is or are of great value; and they deny that they are of any value whatever. They admit that the wrench claimed to have been patented

as aforesaid has been introduced to the public, but they deny that it has been extensively used; and they also deny that the public have generally acquiesced in the validity of the said re-issued patent or patents.

And these defendants, further severally answering, deny that they are now manufacturing, or have at any time manufactured, any wrench
17 or wrenches of the kind and description described in re-issued patent No. 5026, as mentioned and set forth in said bill of complaint; and they deny that they have in any way or manner infringed said patent No. 5026, or that they have made, used, or vended any wrenches of the kind described by said complainant in his said bill of complaint; and they deny that they have in any way or manner interfered with said complainant's re-issued letters-patent as described in his said bill.

And these defendants, further answering, show that they are informed and believe, and so charge the fact to be, that the said complainant and the said Lacey, nor either of them, were the first, true, and original inventors of the bush wrench and bung claimed by said complainant in his said bill of complaint to have been patented, and letters-patent to have been re issued thereupon, as mentioned and set forth in complainant's said bill; but, on the contrary, these defendants say that long prior to any invention thereof by said complainant and the said Lacey, the said invention and improvement, or invention and improvements, substantially and in all material respects the same, were well known to and publicly used and vended at S't Louis, in the State
18 of Missouri, by one Charles G. Stefel; that he used, manufactured, and vended the same as early as the spring of the year 1871. And the same were also in like manner known & used by Frederick Pabst, of the city of Milwaukee, county of Milwaukee, in the State of Wisconsin, and also by divers other persons in the United States, whose names at present are unknown to these defendants, who pray leave to add such names to this answer when they shall have ascertained the same, whereby, as these defendants charge, the original and the re-issued letters-patent are & were null and void.

And these defendants, further answering, on information and belief say that, on the twenty-second day of March, 1870, letters-patent of the United States, No. 101078, were granted to Joseph F. Aplegate and Casper Pewick, of New Albany, State of Indiana; in the schedule and drawings annexed to which the said inventions or improvements or devices, substantially and in all material respects the same, are fully described and shown, as said letters-patent, or an authenticated copy thereof ready in court to be produced, will more fully and at large appear.

And these defendants further say, upon information and belief, that said Joseph F. Applegate and Casper Pewick were the original
19 or first inventors of the said improvement or device, so described and shown in schedule and drawings annexed to said last-named letters-patent.

And these defendants, further answering, upon information and belief say, that the alleged invention described and claimed in said letters-patent of the complainant was not new and original with him, the said complainant, and the said Lacey; but that on the contrary, as defendants are informed and believe, and so charge the fact to be, that long before his letters-patent were issued, and long before his and the said Lacey's discovery or invention, letters-patent for substantially the same invention or device were issued to Abel Thompson, of Brooklyn, State of New York, assignee of John S. Loomis and Abel Thompson, on or about , A. D. 1863, said patent being numbered 37722; whereby

these defendants charge that the said letters-patent of the said complainant are null and void.

And these defendants, further answering, say that several months ago they applied at the Patent-Office in Washington for letters-patent for first new and original invention and discovery for a bush and bung-wrench, a rough diagram of which is hereunto annexed, and
20 marked "Exhibit A," and made part of this answer; and they also filed in the Patent-Office specifications describing their said machine and the mode of its manufacture, a copy of which is hereunto annexed, and marked "Exhibit B," and made part of this answer; that they are informed and believe that said patent has been issued, but has not yet been received by them; and these defendants allege that their machine, thus patented, is substantially different in its construction and substantially different in its mode of operation, and is no infringement upon the complainant's said machine, invention, or patent.

And these defendants further say that they have no intention, nor have they ever had, of manufacturing, using, or vending any other bung-wrench and bush than the one so as aforesaid patented by them.

And these defendants, further answering, say that they are informed by mechanical experts, and verily believe, that complainant's wrench, described in his bill of complaint, is without novelty; that it required no inventive genius to produce it; that it could or might have been produced by mechanical dexterity alone; therefore these defendants charge that the said letters-patent of the said complainant are null & void.

And these defendants, further answering, say that they are informed & believe, and so charge the fact to be, that the surrender by
21 complainant of the original patent and the procurement of the re-issued patent were for the sole and only purpose of expanding or contracting the claim in the original patent, and thereby secure an invention or device wholly different from the one described in the original specifications, and, as these defendants are informed and believe, that it so appears in the proceedings for obtaining the re-issue, in the surrender, and in the amended specifications; and these defendants, therefore, charge that the complainant's said re issued letters-patent are null & void.

Without this, that there is any other cause, matter, or thing, in the said bill or complaint contained, necessary, material, or required to be hereby answered unto, not herein and hereby well and sufficiently answered and confessed, or avoided, traversed, and denied, is true to the knowledge and belief of these defendants; whereupon these defendants humbly pray to be hence dismissed, with their reasonable costs and charges of this suit.

WILLIAM JOHNSON.
EILERT SCHUMACHER.

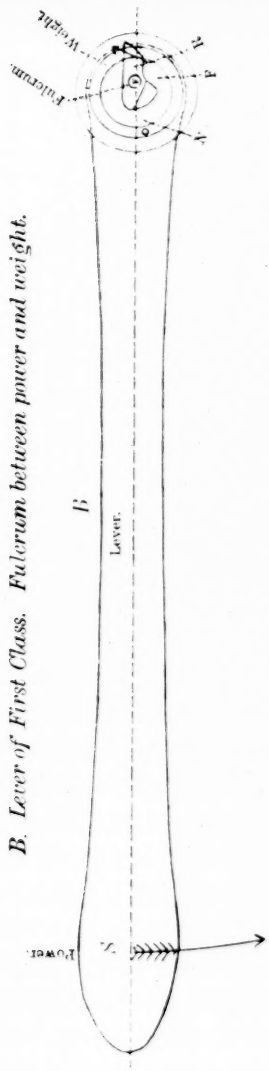
FINCHES, LYNDE & MILLER, *Solicitors.*
A. FINCH, *of Counsel.*

EASTERN DISTRICT OF WISCONSIN, *ss:*

On the 17th day of December, A. D. 1872, before me came
22 William Johnson and Eilert Schumacker, who, by me being duly sworn, made oath that they have respectively heard read the foregoing answer by them subscribed, and that they know the contents thereof; that the same is true, except those matters stated upon information and belief, and as to those matters they believe it to be true.

EDWARD KURTZ, *Clerk.*

23 EXHIBIT A. 24 B.



B. Lever of First Class. Fulcrum between power and weight.

NATURE AND OBJECT OF THE INVENTION.

My invention is a wrench to screw bung-bushings into beer-barrels, and fits into the opening, and strikes against a projection on the bushing at the inner end of the bush, thus preserving the whole strength of the bushing. The notch on the outer side of the bushing, which weakens, it is avoided.

Description of the drawing forming part of this specification.

Figure 1 is a sectional view of the wrench.

Fig. 2, a perspective view of the wrench and bushing.

GENERAL DESCRIPTION.

A is the handle of the wrench; B, the projection which fits into the inside of the bushing; C, a rod which runs down through the projection B, in a hole nearer one side than the other; D, a piece on the end of the rod C, which fits into a recess in the bottom of B; E, a knob on the top of rod C; F, spring on rod C, under knob E, which holds the rod C up in place; G, a screw in the top of rod C, which holds knob E on securely in place; H, the bush; I, the projection on the bottom of the bushing which the part of the wrench D strikes against to screw the bushing into place.

The operation of the wrench is
25 as follows: The part B is placed in the bush, and the operator then takes hold of the knob E and turns it, and, as it turns, the part D at the bottom is turned out and catches against the projection I, in the bushing, and then the handle A and the bush will turn with it and be screwed home.

FEBRUARY 3, 1873.

This day came the complainant, by his solicitors, and filed his replication, as follows:

Replication.

United States circuit court, eastern district of Wisconsin.

GEORGE B. CORNELL
vs.
EILERT SCHUMACKER AND WILLIAM JOHNSON.

The replication of George B. Cornell, complainant, to the answer of William Johnson and Eilert Schumacker, defendants.

This repliant, saving and reserving to himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says that he will aver, maintain, and prove his bill of complaint to be true, certain, and sufficient in the law to be answered unto; and that the said answer of the said
26 defendants is uncertain, untrue, and insufficient to be replied unto by this repliant; without this, that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed, and avoided, traversed, or denied, is true; all which matters and things this repliant is and will be ready to aver, maintain, and prove, as this honorable court shall direct, and humbly prays as in and by his said bill he has already prayed.

WEST & BOND,
Sol'rs for Comp't.

Order of reference to H. W. Bishop, Chicago, to take testimony.

JULY 8, 1873.—This day came the parties, by their counsel; and by consent it is ordered by the court that reference be, and hereby is, made to Henry W. Bishop, of Chicago, Ill's, to take testimony herein, and that the time for the complainant to take his evidence be extended to the first Monday of August, and that the time for the defendants to take their evidence be extended to the first Monday of October next.

Time for taking testimony extended.

OCTOBER 10, 1873.—This day came the parties, by their counsel; and, on application of the defendants, it is ordered by the court that
27 the time to take their testimony be, and hereby is, extended to the first day of December next, and that the complainant have until the first day of January next to take his evidence in reply.

NOVEMBER 24, 1873.—Deposition of Edward L. M. Hoare on behalf of the defendants received from Asahel Finch, esq., and filed.

NOVEMBER 26, 1873.—Depositions on part of defendants, taken before Edward Kurtz, examiner in chancery, received from him, and filed.

Set down for hearing.

DECEMBER 18, 1873.—Pursuant to stipulation this day filed, on motion of West & Bond, complainant's solicitors, ordered, that this cause be, and the same is hereby, set down for hearing at the next term of this court, to be held on the 1st Monday of January, 1874.

JANUARY 1, 1874.—Depositions received from post-office and filed.

JANUARY 13, 1874.—Deposition of Cha's G. Stifel, taken on behalf of the defendants at S't Louis, M'o, received from Asahel Finch, esq., and filed.

FEBRUARY 17, 1874.—Depositions received from post-office and filed.

28 *Hearing.*

FEBRUARY 24, 1874.—This day this cause came on to be heard upon the pleadings and proofs, and was argued by M'r West for the complainant, and by Asahel Finch for the defendants; and the hearing not being concluded, the same was adjourned until to-morrow morning.

Hearing concluded.

FEBRUARY 25, 1874.—This day came the parties, by their counsel, and the hearing of this cause was resumed; and being concluded, the court held the same under advisement.

And the following testimony was read in evidence on the hearing of said cause:

29 COMPLAINANT'S TESTIMONY.

United States circuit court, eastern district of Wisconsin. In equity.

GEORGE B. CORNELL
vs.
W'M JOHNSON & EILERT SCHUMACHER.

Mess'rs FINCHES, LYNDE, & MILLER,
Sol'rs for Defendants:

Please take notice that testimony will be taken in behalf of said complainant (to be used upon the hearing of said cause) before Henry W. Bishop, special examiner, at his office in the city of Chicago, Cook County, Illinois, Nos. 157–159 La Salle street, room No. 25, on the 22d day of July, 1873, commencing at two o'clock in the afternoon, and continuing from day to day till completed.

Y'rs, &c.,

WEST & BOND,
Sol'rs for Comp't.

Rec'd a copy of the within notice this fifteenth day of July, 1873, and we consent that testimony be taken at the time & place herein mentioned.

FINCHES, LYNDE & MILLER,
Sol'rs for Defendants.

30 *Deposition of Geo. B. Cornell.*

United States circuit court, eastern district of Wisconsin. In equity.

GEO. B. CORNELL
vs.
WILLIAM JOHNSON EILERT SCHUMACHER.

Depositions of George B. Cornell, the complainant herein, and Norman H. Sherborne, witnesses for the complainant, taken pursuant to the sixty-seventh rule in equity, before Henry W. Bishop as special examiner, master in chancery of the circuit court of the United States for the northern district of Illinois. West and Bond, counsel for complainant; Finches, Lynde & Miller, counsel for defendants.

CHICAGO, ILL., *July 22d*, 1873.

GEORGE B. CORNELL, the complainant, being duly sworn, was examined in chief by M'r West as follows:

Int. 1. State your name, age, residence, and occupation.

Ans. Geo. B. Cornell; age, 41; residence, Chicago; occupation, bush business.

Int. 2. Are you acquainted with the defendants in this case; and what, if any, business relations have you had with them?

Ans. I am. I have had them manufacturing bushes for me; bushes for bung-holes of beer-barrels.

31 Int. 3. What means or instrument do you use for inserting those bushes into place?

Ans. It is a wrench, described in letters-patent of the United States to John Lacy and G. B. Cornell, numbered re-issue # 5026.

Int. 4. State what if anything you know about the manufacture and sale by the defendants of wrenches containing the invention described in the claim in said letters-patent.

Ans. Well, I know them to manufacture the wrenches. I think it was in December; I am not positive as to the date. In December I saw the wrenches in Schumacker & Johnson's office; in December of last year, before this suit was commenced—in their office in Milwaukee. I asked them what they were making those wrenches for. They said they were making them to sell. They claimed they were better wrenches than mine. Johnson and Schumacker both talked with me. I asked them why they commenced making anything of that kind to infringe upon me before they got my contract done. They said they had a right to it, and they was going to manufacture them; and they had two kinds of wrenches, and showed me some they had made. They didn't say they had sold any. I heard of their having an order for me, and I

32 went to defendants and asked them why they hadn't reported that order to me. They wouldn't give me anything very definite. I told them where I had been, and asked them why they hadn't reported the order as usual, and got no very definite answer.

Int. 5. Have you a model representing the wrench which you saw at the office of the defendants and which they exhibited to you? If so, will you produce it?

Ans. I have. (Witness produces a model, "Complainant's Exhibit A," which model is offered in evidence by complainant's counsel.)

Int. 6. Have you a bush with which that wrench was designed to be used? If so, will you produce it?

Ans. I have. (Witness produces a bush marked "Complainant's Exhibit B," which is offered in evidence by complainant's counsel.)

Cross-examination by M'r Finch:

X-int. 1. When did the defendants make any of the bush and wrenches which you have testified to in your direct examination?

Ans. The first I see, it was in December if I am not mistaken—I think it was in December, '72.

33 X-int. 2. He made those under contract with you, did he not?

Ans. No, sir; he made no wrenches under contract with me.

X-int. 3. Haven't you already stated that he made bushes and wrenches for you under contract?

Ans. No, sir; I have not. I stated he made bushes for me under contract; no wrenches under contract.

X-int. 4. Do you claim that you have a patent for the bush independent of the wrench?

Ans. I do, sir.

X-int. 5. Do you claim that the bush is covered by your patent ℔ 5026?

Ans. No, sir; that is the wrench patent.

X-int. 6. Then you mean to be understood as saying that you did make a contract with the defendant to make for you bushes?

Ans. Yes, sir.

X-int. 7. Of the kind and description that you claim are covered by the patent ℔ 5026?

Ans. No, sir.

X-int. 8. What kind and description of bushes did you contract with them to make?

Ans. They are a cast-iron bush with a V-notch furnished by my molds.

X-int. 9. Do you know of their having made any others than those that you ordered yourself?

34 Ans. Yes, sir; I do.

X-int. 10. When did they make them, and for whom?

Ans. Well, I can't give the dates, gentlemen; I can't give the dates when they took their orders.

X-int. 11. Do you claim the wrench and bush in combination?

Ans. No, sir.

X-int. 12. How do you claim them?

Ans. I claim them separate, sir.

X-int. 13. By virtue of what patent do you claim to be the inventor of the bush?

Ans. I claim the bush under the re-issue ℔ 5027.

X-int. 14. When did you first see a bung-bush?

Ans. I think it was in 1866; I think it was.

X-int. 15. Where did you see that?

Ans. In the city of Chicago.

X-int. 16. Where was that manufactured—the one you saw?

Ans. I don't know where it was manufactured, sir.

X-int. 17. How did that compare with the one you have introduced here in evidence?

Ans. It aint like mine at all, as I claim.

X-int. 18. I don't ask you what you claim, but ask you to state wherein it differs from yours?

Ans. It differed in shape and size.

35 X-int. 19. Is that all the difference you can mention?

Ans. The difference, his is nailed on, spiked on, with a smooth surface—no screw-thread; very thin, or put on with screws.

X-int. 20. Are you acquainted with the patent bung-bush and wrench of one Stille, of St Louis?

Ans. Yes, sir. I think it is not patented.

X-int. 21. When did you first see that?

Ans. I saw that in the spring of '71.

X-int. 22. Are you acquainted with a patent issued to Joseph F. Applegate and Casper Feiock?

Ans. No, sir.

X-int. 23. Did you ever hear of a bush and bung-wrench invented by one Abel Thompson, of Brooklyn, and John S. Loomis?

Ans. No, sir, not that I know of; no recollection.

G. B. CORNELL.

Subscribed and sworn to before me this 22d day of July, 1873.

H. W. BISHOP,
Special Examiner.

NORMAN H. SHERBORNE, a witness produced on behalf of the complainant, being duly sworn, was examined in chief by M'r West, as follows:

Int. 1. Please state your name, age, residence, and occupation.

36 Ans. Norman H. Sherborne; age, 37; residence, Elgin, Ill.; occupation, solicitor of patents.

Int. 2. What opportunities have you had of becoming acquainted with patents and patented inventions?

Ans. I have been engaged more or less in soliciting for patents for the last ten years. I have testified as an expert in patent cases frequently.

Int. 3. Have you examined and are you familiar with letters-patent of the United States granted to John Lacy and Geo. B. Cornell, being reissue # 5027, and also other letters-patent of the United States to the same parties re-issue # 5026?

Ans. I have, and am.

(Complainant's counsel offered in evidence said letters-patent to said Lacy and Cornell, re-issue # 5026, marked "Complainant's Exhibit C," and also said patent, re-issue # 5027, marked "Complainant's Exhibit D.")

Int. 4. Have you a bush made in accordance with said re-issue patent # 5027; and, if so, will you produce it?

Ans. I have.

(Witness produces a bush which is marked "Complainant's Exhibit E," which complainant's counsel offer in evidence.)

Int. 5. Have you here a wrench made in accordance with specifications of, and containing the invention claimed in, said patent re-issue # 5026; if yea, will you produce it?

Ans. I have.

37 (Witness produces a working wrench which is marked "Complainant's Exhibit F," and offered in evidence by complainant's counsel.)

Int. 6. Have you examined "Complainant's Exhibit A?" And, if yea, please state whether in your opinion it is substantially like or unlike the wrench described and claimed in said patent "Complainant's Exhibit C," re-issue # 5026, and give your reasons for any opinion which you may express.

Ans. I have examined it, the wrench marked "Exhibit A," and I find it substantially identical with the invention claimed in the re-issued patent ℛ 5026. In the claim in said re-issued patent the object of the invention was to provide a means for turning the bushing into place without the bushing being turned oblique, the bung opening. For this purpose a cast-metal core is arranged in the shank of the wrench in such a manner as to be inserted into the aperture in the bushing. I find in Exhibit A a core arranged to enter the aperture in the bushing substantially in the same manner and for the same purpose. In the re-issued patent ℛ 5026 the wrench is provided with a V shaped projection, which takes into the corresponding notch formed in the periphery of the bushing, the object of which is to prevent the wrench or
38 core proper from turning independent of the bushing. In Exhibit A I find the lower or smaller end of the core to be provided with a notch, into which is fitted a ratchet or pa'l, which is pivoted to the core in such a manner as to engage with a projection formed in the end of the threaded portion of the bush, the object of which is to prevent the core from turning independent of the bushing.

Int. 7. State what parts of the wrench are included in this claim in the patent.

Ans. Shank A, plate B, projection D, and core E.

Int. 8. State whether or not you find these parts in Exhibit A substantially.

Ans. I do, substantially. I find the shank, the plate, as shown in the drawings of said patent, the core, and the projection, the pawl acting as such projection, being the same parts as set forth in the claim, there being a slight change in their arrangement; that is to say, so much as relates to the pawl.

Int. 9. In use, what difference, if any, is there between these two wrenches A and F; what difference in their operation?

Ans. There is no material difference in their operation; they both act as a lever of the first order.

39 Cross-examination by M'r Finch:

X-int. 1. To what class of the mechanical powers do the two machines belong to properly?

Ans. To the class of lever-powers.

X-int. 2. To what class of lever-power does the plaintiff's machine belong?

Ans. The first.

X-int. 3. To which class does the defendant's machine belong?

Ans. The first class.

X-int. 4. You, then, claim that both machines or instruments are of the first class, lever?

Ans. I do.

X-int. 5. Will you state where the weight and the power is applied in each machine?

Ans. Inasmuch as both bushings are made to revolve with the core in both devices the power is applied to the end of the shank, the weight or resistance is transmitted to the periphery of that portion of the bushing which comes in contact with the periphery of the bung-hole; consequently that portion of the periphery of the bushing mentioned becomes the fulcrum.

X-int. 6. Is that the only answer you can give to the previous question?

Ans. No. I might say that the power was applied to the shank, the

Ans. The difference, his is nailed on, spiked on, with a smooth surface—no screw-thread; very thin, or put on with screws.

X-int. 20. Are you acquainted with the patent bung-bush and wrench of one Stifle, of S't Louis?

Ans. Yes, sir. I think it is not patented.

X-int. 21. When did you first see that?

Ans. I saw that in the spring of '71.

X-int. 22. Are you acquainted with a patent issued to Joseph F. Applegate and Casper Feiock?

Ans. No, sir.

X-int. 23. Did you ever hear of a bush and bung-wrench invented by one Abel Thompson, of Brooklyn, and John S. Loomis?

Ans. No, sir, not that I know of; no recollection.

G. B. CORNELL.

Subscribed and sworn to before me this 22d day of July, 1873.

H. W. BISHOP,
Special Examiner.

NORMAN H. SHERBORNE, a witness produced on behalf of the complainant, being duly sworn, was examined in chief by M'r West, as follows:

Int. 1. Please state your name, age, residence, and occupation.

36 Ans. Norman H. Sherborne; age, 37; residence, Elgin, Ill.; occupation, solicitor of patents.

Int. 2. What opportunities have you had of becoming acquainted with patents and patented inventions?

Ans. I have been engaged more or less in soliciting for patents for the last ten years. I have testified as an expert in patent cases frequently.

Int. 3. Have you examined and are you familiar with letters-patent of the United States granted to John Lacy and Geo. B. Cornell, being re-issue ℔ 5027, and also other letters-patent of the United States to the same parties re-issue ℔ 5026?

Ans. I have, and am.

(Complainant's counsel offered in evidence said letters-patent to said Lacy and Cornell, re-issue ℔ 5026, marked "Complainant's Exhibit C," and also said patent, re-issue ℔ 5027, marked "Complainant's Exhibit D.")

Int. 4. Have you a bush made in accordance with said re-issue patent ℔ 5027; and, if so, will you produce it?

Ans. I have.

(Witness produces a bush which is marked "Complainant's Exhibit E," which complainant's counsel offer in evidence.)

Int. 5. Have you here a wrench made in accordance with specifications of, and containing the invention claimed in, said patent re-issue ℔ 5026; if yea, will you produce it?

Ans. I have.

37 (Witness produces a working wrench which is marked "Complainant's Exhibit F," and offered in evidence by complainant's counsel.)

Int. 6. Have you examined "Complainant's Exhibit A?" And, if yea, please state whether in your opinion it is substantially like or unlike the wrench described and claimed in said patent "Complainant's Exhibit C," re-issue ℔ 5026, and give your reasons for any opinion which you may express.

Ans. I have examined it, the wrench marked "Exhibit A," and I find it substantially identical with the invention claimed in the re-issued patent ℔ 5026. In the claim in said re-issued patent the object of the invention was to provide a means for turning the bushing into place without the bushing being turned oblique, the bung opening. For this purpose a cast-metal core is arranged in the shank of the wrench in such a manner as to be inserted into the aperture in the bushing. I find in Exhibit A a core arranged to enter the aperture in the bushing substantially in the same manner and for the same purpose. In the re-issued patent ℔ 5026 the wrench is provided with a V shaped projection, which takes into the corresponding notch formed in the periphery of the bushing, the object of which is to prevent the wrench or
38 core proper from turning independent of the bushing. In Exhibit A I find the lower or smaller end of the core to be provided with a notch, into which is fitted a ratchet or pa'l, which is pivoted to the core in such a manner as to engage with a projection formed in the end of the threaded portion of the bush, the object of which is to prevent the core from turning independent of the bushing.

Int. 7. State what parts of the wrench are included in this claim in the patent 5026, as you understand it.

Ans. Shank A, plate B, projection D, and core E.

Int. 8. State whether or not you find these parts in Exhibit A substantially.

Ans. I do, substantially. I find the shank, the plate, as shown in the drawings of said patent, the core, and the projection, the pawl acting as such projection, being the same parts as set forth in the claim, there being a slight change in their arrangement; that is to say, so much as relates to the pawl.

Int. 9. In use, what difference, if any, is there between these two wrenches A and F; what difference in their operation?

Ans. There is no material difference in their operation; they both act as a lever of the first order.

39 Cross-examination by M'r Finch:

X-int. 1. To what class of the mechanical powers do the two machines belong to properly?

Ans. To the class of lever-powers.

X-int. 2. To what class of lever-power does the plaintiff's machine belong?

Ans. The first.

X-int. 3. To which class does the defendant's machine belong?

Ans. The first class.

X-int. 4. You, then, claim that both machines or instruments are of the first class, lever?

Ans. I do.

X-int. 5. Will you state where the weight and the power is applied in each machine?

Ans. Inasmuch as both bushings are made to revolve with the core in both devices the power is applied to the end of the shank, the weight or resistance is transmitted to the periphery of that portion of the bushing which comes in contact with the periphery of the bung-hole; consequently that portion of the periphery of the bushing mentioned becomes the fulcrum.

X-int. 6. Is that the only answer you can give to the previous question?

Ans. No. I might say that the power was applied to the shank, the

40 weight or resistance was upon the periphery of the bushing.

X-int. 7. Do not the two machines produce the same results when operated?

Ans. They do.

X-int. 8. Do you mean, then, to be understood as saying that because they do produce the same results they are therefore substantially identical?

Ans. I do; in all their essential elements.

Redirect:

Int. 1. Do you mean by your answer to the last cross-interrogatory to be understood as saying that these two instruments are substantially identical simply because they produce the same results?

Ans. I do not. All the essential elements are found in one that exist in the other, there being but a slight change in the manner of securing the bushing to the core so as to revolve therewith.

Int. 2. If the projection D in complainant's wrench were placed upon the opposite side of the core would that make any material difference?

Ans. It would not.

Int. 3. Might not the pawl in "Complainant's Exhibit A" be so arranged as to be placed on the same side of the core that the pro-

41 jection D is in the patent?

Ans. It could; that is to say, it might be placed on the opposite side of the core to which it is now arranged.

NORMAN H. SHERBORNE.

Subscribed and sworn to before me this 22d day of July, 1873.

H. W. BISHOP,
Special Examiner.

42 C.

Complainant's Exhibit C.—H. W. B., sp. exm.

No. 5026. Re-issue.

The United States of America to all to whom these presents shall come:

Whereas John Lacey and George B. Cornell, of Chicago, Illinois, said Lacy assignor to G. B. Cornell, have presented to the Commissioner of Patents a petition praying for the re-issue of letters-patent for an alleged new and useful improvement in wrenches for extracting bung-bushes, (for which letters-patent were issued to said Cornell, dated August 29, 1871, which letters having been surrendered the same have been cancelled and new letters ordered to issue to him on two separate amended specifications,) a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and have complied with the various requirements of law in such cases made and provided; and whereas, upon due examination made, the said claimants are adjuged to be justly entitled to a patent under the law:

Now, therefore, these letters-patent are to grant unto the said George B. Cornell, his heirs or assigns, for the term of seventeen years from the twenty-ninth day of August, one thousand eight hundred and seventy-one, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

43 In testimony whereof I have hereunto set my hand and caused the seal of the Patent-Office to be affixed, at the city of Washington, this sixth day of August, in the year of our Lord one thousand

eight hundred and seventy-two, and of the Independence of the United States of America the ninety-seventh.

SEAL OF PATENT-OFFICE OF U. S.

W. H. SMITH,
Acting Secretary of the Interior.

Countersigned:

M. D. LEGGETT, *Commissioner of Patents.*

44 J. LACEY & G. B. CORNELL.

Improvement in wrenches for extracting bung-bushes.

No. 5026.—Re-issued Aug. 6, 1872.

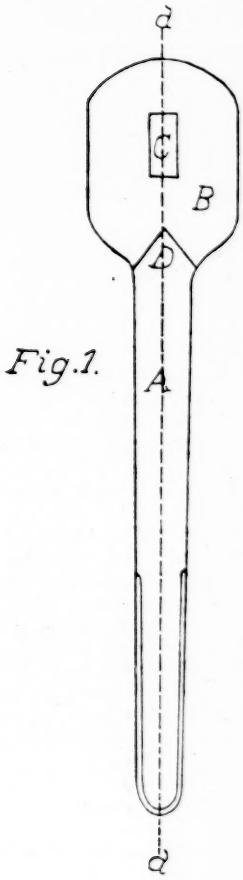


Fig. 1.

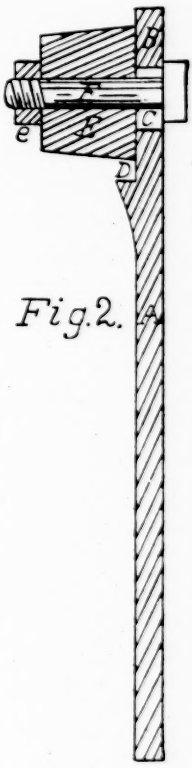


Fig. 2.

Inventor:

GEORGE B. CORNELL,
By SHERBURNE & CO.,
Attorneys.

Witnesses:
N. H. SHERBURNE.
J. W. MERRIAM.

45 UNITED STATES PATENT-OFFICE.

John Lacey and George B. Cornell, of Chicago, Illinois; said Lacey assignor to G. B. Cornell. Improvement in wrenches for extracting bung-bushes. Specification forming part of letters-patent No. 118617, dated August 29, 1871; re-issue No. 5026, dated August 6, 1872. Division A.

To all whom it may concern:

Be it known that we, John Lacey and George B. Cornell, of Chicago, in the county of Cook, and State of Illinois, have invented an improved wrench for securing metallic bushing in casks or barrels; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a bottom view of a wrench embodying the said improvement, and Fig. 2 is a longitudinal central section of the same taken on the line *d d* drawn through Fig. 1.

Similar letters of reference indicate like parts in both figures of the drawing.

The present invention relates to a wrench employed in securing a metallic bung-bushing within the aperture of casks, barrels, &c.; and the improvement consists in providing the shank of the wrench with a cylindrical core so arranged as to closely fit the aperture in the bushing, and a V-shaped projection adapted to fit a corresponding notch formed in the bushing, whereby the same may be turned into place without assuming an obliqne position within the bung-opening, and also preventing the wrench from slipping from its seat; all of which will be more fully understood by the following description:

In the drawing, A represents the shank of the wrench, which consists of a plain metal bar of the requisite length. Attached to one end of this bar is a flat metal plate, B, which is provided at its center with an elongated mortise, C, as shown in Fig. 1. This shank is so formed, at its junction with the plate, as to provide a V-shaped projection, D, the point of which extends forward toward the center of the plate. E represents a cylindrical cast-metal core, which is made tapering, and so arranged as to fit the aperture in the bushing. This core is made separate from the plate, and is attached thereto by means of a bolt, F, which passes through the mortise formed in the plate, as shown in Fig. 2. The arrangement of this core is such as to admit of being removed from the bolt by removing the nut *e*, the object of which is to allow a core of greater diameter to be substituted when used in bushings of large size, provision being made for the elongation of the mortise in the plate for the moving of the bolt toward or from the projection D, which becomes necessary when cores of different sizes are used.

In using the said invention the core is inserted into the opening through the bushing, and turned until projection D falls into a notch formed in the bushing, which is adapted to fit the same; and by means of the core the bushing is kept steady, and prevented from assuming an oblique position in the bung-opening while being turned into place, and by the contact of the projection within the notch the wrench is prevented from slipping from its seat, thereby enabling the bushing to be readily turned into place.

We do not wish to confine ourselves exclusively to the V-shaped pro-

jection, as any form that will prevent the core from turning independent of the bushing will produce the same result.

Having thus described the said invention, we claim—

The wrench herein described, consisting of a shank, A, plate B, projection D, and core E, the said core adapted to fit the opening through the bushing, whereby the same is prevented from assuming an oblique position when being turned into place, substantially as described.

JOHN LACEY.
GEO. B. CORNELL.

Witnesses:
WILLIAM EDGAR.
J. W. MERRIAM.

46 *Complainant's Exhibit D.—H. W. B., s'p ex'r.*

No. 5027.] [Re-issue.

The United States of America to all to whom these presents shall come:

Whereas John Lacey and George B. Cornell, of Chicago, Illinois, said Lacey assignor to G. B. Cornell, have presented to the Commissioner of Patents a petition praying for the re-issue of letters-patent for an alleged new and useful improvement in bushes for bungs, (for which letters-patent were issued to said Cornell, dated August 29, 1871, which letters having been surrendered the same have been canceled, and new letters ordered to issue to him on two separate amended specifications,) a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and have complied with the various requirements of law in such cases made and provided; and whereas, upon due examination made, the said claimants are adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters-patent are to grant unto the said George B. Cornell, his heirs or assigns, for the term of seventeen years from the twenty-ninth day of August, one thousand eight hundred and seventy-one, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

47 In testimony whereof I have hereunto set my hand and caused the seal of the Patent-Office to be affixed, at the city of Washington, this sixth day of August, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States of America the ninety-seventh.

{SEAL OF THE PATENT-OFFICE OF THE U. S.}

W. H. SMITH,
Acting Secretary of the Interior.

Countersigned:
M. D. LEGGETT,
Commissioner of Patents.

48 J. LACEY & G. B. CORNELL.

Improvement in bushes for bungs.

No. 5027.—Re-issued Aug. 6, 1872.

Fig. 1.

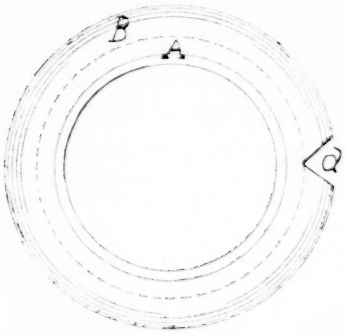
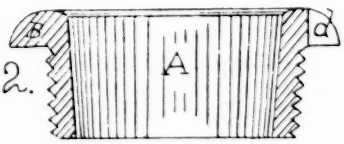


Fig. 2.



Inventor:

GEORGE. B. CORNELL,
By SHERBURNE & CO., *Attorneys.*

Witnesses:
N. H. SHERBURNE.
J. W. MERRIAM.

49 UNITED STATES PATENT-OFFICE.

John Lacey and George B. Cornell, of Chicago, Illinois; said Lacey assignor to G. B. Cornell. Improvement in bushes for bungs. Specification forming part of letters-patent No. 118617, dated August 29, 1871; re-issue No. 5027, dated August 6, 1872. Division B.

To all whom it may concern:

Be it known that we, John Lacey and George B. Cornell, of Chicago, in the county of Cook and State of Illinois, have invented a new and improved metallic bushing for the bungs of barrels, casks, &c.; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which the said invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top view or plan of a bushing embodying the said improvement, and Fig. 2 is a vertical central section of the same.

Similar letters of reference indicate like parts in both figures of the drawing.

The said invention relates to means for protecting the bungs of barrels, casks, &c.; and the improvement consists in a metallic bushing for lining the periphery of the aperture, the arrangement of which will be more fully understood by the following description:

In the drawing, A represents the bushing proper, which consists of an annular ring of metal. This ring is made tapering on both its outer and inner sides, as shown in Fig. 2, and is screw-threaded upon its outer side, by which means the same is secured within the aperture in the cask. This thread may be formed by a suitable tool, or may be formed in the mold, as found most advantageous. The larger end of the said ring is provided with a flange, B, the outer surface or periphery of which is made in an ovolo shape, and is provided with a V-shaped notch, *d*, which extends inward to a point near the body of the ring, as shown in Fig. 1. The object of this notch is to allow a suitable wrench, adapted for the purpose, to engage therewith, whereby the said bushing may be turned into place without the wrench slipping from its seat, as would be the case with a bushing having a smooth surface. It will be observed by reference to the drawing that the aperture in the bushing is made larger at the end uniting with the flange than that of the opposite end, the object being to allow the stopper or bung to be more readily introduced, also to insure a more perfect fit by compressing the stopper as it is driven into place. It will also be observed that the outer side of the said ring or bushing is larger at the end uniting with the flange than the opposite end, the object being to allow the same to be more readily introduced into the aperture in the cask and to form its own thread in the wood as it is turned into place, thereby insuring a tight joint.

Having thus described our invention, we claim—

The screw-threaded metallic bung-bushing, made tapering upon both its outer and inner sides, and provided with the flange B having the V-shaped notch *d*, as and for the purpose described.

JOHN LACEY.
GEO. B. CORNELL.

Witnesses:
J. W. MERRIAM.
N. H. SHERBURNE.

50 United States circuit court, eastern district of Wisconsin.

GEO. B. CORNELL, COMP'T
vs.
EILERT SCHUMACHER, WILLIAM JOHNSON, def'ts.

It is hereby stipulated and agreed by and between the solicitors for the parties hereto, that testimony of witnesses on behalf of complainant may be taken at the office of West & Bond in Chicago, before O. W. Bond, a notary public, on Tuesday, the 30th of December, 1873, and be read upon the hearing of said cause with the same effect as though taken upon notice & before a commissioner duly appointed.

FINCHES, LYNDE & MILLER,
Solicitors for Def'ts.

Deposition of David J. Powers.

United States circuit court, eastern district of Wisconsin.

GEORGE B. CORNELL
vs.
EILERT SCHUMACHER AND WILLIAM JOHNSON.

At Chicago, Illinois, on this 30th day of December, A. D. 1873,
51 before O. W. Bond, notary public. Present, E. A. West on behalf of complainant, and A. Finch, esq., on behalf of defendants. At half past one o'clock in the afternoon, pursuant to stipulation hereto annexed, the parties to the said cause, by their counsel as above, met at the office of Mess'rs West & Bond, room 8, No. 208 La Salle street, Chicago, Illinois, when the following proceedings were had:

DAVID J. POWERS, a witness produced on behalf of the complainant, being first duly sworn, deposes and says in answer to interrogatories to him propounded by E. A. West, esq., of counsel for complainant, as follows:

Int. 1. What is your name, age, residence, and occupation?

Ans. David J. Powers; age, 59 years; residence, Chicago; occupation, machinist and mechanical engineer.

Int. 2. What opportunities have you had for becoming familiar with patents and patented inventions?

Ans. I have been familiar with patents of my own and others for twenty years; and have been practicing as an expert in patent causes for four or five years.

Int. 3. Are you familiar with letters-patent of the United
52 States, re-issue No. 5026, "Complainant's Exhibit C" in this cause?

Ans. Yes.

Int. 4. What do you understand to be the distinguishing feature of the wrench described and claimed in said patent?

Ans. The distinguishing feature in this patent is the core, which fits closely in the bushing, for the reason that it enables the operator to adjust the bush in the proper position as it is turned into its place.

Int. 5. Have you examined model marked "Complainant's Exhibit A—H. W. B., Spe. Ex'r," said to represent defendants' wrench?

Ans. Yes.

Int. 6. The complainant's wrench and that of the defendants being both levers, will you state how you classify them; and what difference, if any, there is in the power of each, the conditions being the same in both cases?

Ans. I consider the levers in both cases to be of the character of universal levers, resembling substantially the crank and axle, or the common wrench, which rotate around a fixed center, as a fulcrum, and overcome the resistance, which is distributed both forward and back of the center, and all around it. The levers are thus neither of the first or second power, distinctively, but partake equally of both the
53 first and second powers, as they are ordinarily classified. The powers of the lever, "Complainant's Exhibit A," and in complainant's Exhibit C, are the same in both cases; as in both cases the core is attached firmly to the bushing and they act as an entirety as fully as though they were bolted or welded together.

Int. 7. Look at the exhibit attached to deposition of Charles J. Stifel in this case, and state whether, in your opinion, the wrench there repre-

sented is substantially like or unlike the complainant's wrench, and give your reason for your opinion.

Ans. The wrench referred to is substantially unlike complainant's wrench, for the reason that it has no core or steadying center to enter and fit closely and firmly in the bush, when being used, by which the operator is enabled to adjust the position of the bush effectually, or by which the wrench is attached firmly to the bush, so far as holding fast is concerned, when a heavy strain is applied to it, as has to be in turning in or out a bush.

Int. 8. Look at defendants' mechanical exhibit marked "B, Edw. Curtz, examiner," being a metal bush and bung combined, and, assuming that the wrench to be used with this exhibit is similar to that
54 about which you have testified in your last answer, state whether, in your opinion, this exhibit, either with or without the wrench, is substantially the same thing as complainant's wrench, and give your reasons.

Ans. It is not substantially the same thing as complainant's wrench, for the reason that it lacks the central supporting core firmly attached to a wrench, or lever, with which to turn it; while the bung is somewhat similar to the core in complainant's wrench, it wholly lacks any firmly attached lever, with which to operate and control it, in adjusting the bushing.

Int. 9. What material difference, if any, would there be in use, between this Exhibit B, referred to in your last answer, and the device represented in the exhibit attached to said Stifel's deposition? and give your reasons for any opinion you may express.

Ans. In the use of the two devices, so far as the inserting of the same, or removing from the cask is concerned, they are substantially alike, neither affording any sufficient means for adjusting the bushing, or for holding fast to it, under strain as is desirable; what difference there may be, so far as the metallic bung is concerned, I do not fully understand.

55 Int. 10. For the purpose of inserting the bush in place, what advantage, if any, has this Exhibit B with its wrench over the device shown in the exhibit attached to said Stifel's deposition?

Ans. No substantial advantage, as I can perceive; they are both handled by loose wrenches of a substantially similar construction.

Cross-examination of said witness by A. Finch, esqr., of defendants' counsel.

X-int. 1. In your direct examination, the reasons which you assign for the differences between the Stifil machine and the complainants, do they not more particularly apply to utility rather than identity?

Ans. I consider they apply to both identity and utility.

X-int. 2. They both produce the same result, do they not? In other words, they both screw a bush into a barrel?

Ans. Yes, so far as screwing the bush in, they produce the same result; but in case the bush goes oblique or awry, complainant's wrench admits of its easy adjustment to a vertical or proper position, while the other does not, to any sufficient extent.

56 X-int. 3. That, then, only shows that the complainant's machine is an improvement upon the Stifel, does it not?

Ans. It shows that the complainant's machine is an improved and better one for the purpose than the Stifel, but perhaps not an improvement on the Stifel's specifically; complainant's device shows the progress of the art merely—probably.

Int. 4. Do you find, in the exhibit attached to the Stifel deposition, in the drawing, anything corresponding to the V-shaped projection on the lever of complainant, and described in his patent? & if so, what?

Ans. Yes, there are two fixed points on the Stifel wrench adapted to engage in corresponding notches in the bushing, for the purpose of turning the same, not V-shaped, but square and equivalent. Their function is to attach the wrench to the bushing, as does the V-shaped notch in complainant's device, the difference being that the supporting core in the latter case renders a single point or notch operative.

DAVID J. POWERS.

Subscribed and sworn to before me this 30th day of December, A. D. 1873.

[SEAL.] O. W. BOND,
Notary Public.

57 GEORGE B. CORNELL, the complainant, being first duly sworn, deposes and says as follows, in answer to interrogatories to him propounded by E. A West, esq:

Int. 1. When did John Lacy and yourself invent and first make a wrench like that shown in patent re-issue 5026, "Complainant's Exhibit C."

Ans. It was in the fall of 1869. I can't exactly tell what month.

Int. 2. Were you at that time devoting considerable attention to bushes and wrenches?

Ans. No, not a great deal. I was only studying on it. I was working at some other business. Every idle time I had I devoted to it.

Int. 3. State, if you know, where and by whom bushes and bungs like "Defendants' Exhibit B" were made, and when first made.

Ans. J. L. Whitlock, on La Salle street, came to me and showed me the bush. That was in the spring of 1870. I don't know, of my own knowledge, where and when they were made.

Int. 4. Have such bushes ever come into use in Chicago, to your knowledge?

Ans. No, sir; never—not to my knowledge.

G. B. CORNELL.

Subscribed and sworn to before me this 30th day of December, A. D. 1873.

[SEAL.] O. W. BOND,
Notary Public.

58 STATE OF ILLINOIS,
County of Cook, city of Chicago, ss:

I, Oscar W. Bond, a notary public in and for the city of Chicago, in the county and State aforesaid, do hereby certify that the foregoing depositions of David J. Powers and George B. Cornell were taken by and before me, pursuant to stipulation thereto annexed, at the time and place therein specified; that the parties to the said cause were present at the taking of the same, complainant by his counsel, E. A. West, esq., and defendants by their counsel, A. Finch, esq.; that, before testifying, the said David J. Powers and George B. Cornell were by me duly sworn to testify the truth, the whole truth, and nothing but the truth in the cause aforesaid; that their depositions were by me reduced to writing, and duly subscribed and sworn to before me as therein appears.

And I do further certify that I am neither of counsel nor attorney to any of the parties in said deposition or caption named, and am in no wise interested in the result of said cause.

In testimony whereof I have hereunto set my hand and notarial seal, this 30th day of December, A. D. 1873.

[SEAL.]

O. W. BOND,
Notary Public.

59 DEFENDANTS' TESTIMONY.

Circuit court of the United States, eastern district of Wisconsin.
In equity.

GEORGE B. CORNELL, COMPLAINANT,
against
EILERT SCHUMACHER, WILLIAM JOHNSON, defendants.

GENT: You will please take notice that the defendants in the above cause desire the evidence to be adduced therein be taken orally, under the 67th rule of the Supreme Court as amended. And you will further take notice, that by an order made in said court by Edward Kurtz, esqr., one of the examiners of said court, the examination of witnesses on the part of the said defendants will take place before said examiner at his office in the post-office building in the city of Milwaukee, State of Wisconsin, on the 17th day of November, 1873, at ten o'clock in the forenoon, & proceed as the said examiner may direct.

Dated 5 Nov., 1873.

Yours, &c.,

FINCHES, LYNDE & MILLER,
Solicitors for Defendants.

To Mess'rs WEST & BOND,
Solicitors for Complainant.

Rec'd a copy of this notice this 5th of November, 1873.

WEST & BOND,
Sol'rs for Compl't.

60 Circuit court of the United States for the eastern district of Wisconsin. In equity.

GEORGE B. CORNELL
vs.
EILERT SCHUMACHER & WILLIAM JOHNSON.

Upon application of Finches, Lynde & Miller, solicitors for defendants in the above-entitled cause, it is ordered that testimony on the part of the defendants be taken orally before me on the 17th day of November, 1873, at ten o'clock a. m., at my office in the post-office building in the city of Milwaukee.

And it is further ordered that notice of the time and place of taking said testimony be served on the solicitors of the complainant at least five days before said day.

EDWARD KURTZ,
Examiner in Chancery.

Deposition of Emil Schandein.

Circuit court of the United States for the eastern district of Wisconsin.
In equity.

GEORGE B. CORNELL
vs.
EILERT SCHUMACHER & WILLIAM JOHNSON.

Depositions on the part of the defendants in the above-entitled cause taken before Edward Kurtz, examiner in chancery of said
61 court, at his office in Milwaukee, Wis., pursuant to notice duly served.

MONDAY, *November 17th*, 1873.

Present, A. Finch, counsel for defendants.
E. A. West, " " complainant.

EMIL SCHANDEIN, being duly sworn as a witness in behalf of the defendants, deposes & says:

I reside in the city of Milwaukee, and have resided there seven years. My business is brewer. I am acquainted with screw-bushes and bung-wrenches in use by brewers. I am acquainted with bushes which are not screw-bushes.

Q. Will you look at the one now shown you, which is not a screw-bush, and say, if you are acquainted with it, how long have you been?

A. Yes, I am; since 1869 and 1870. We have used that bush, under the name of the McKenzie bush, the same being marked "Exhibit A," and signed by the examiner and annexed, or accompanying this dep.

Q. Please look at the bush, screw, bung, and lever now shown to you, and say whether you are acquainted with them, & say how long have you been.

A. I seen this bush used in our brewery in 1870. I knew its being used in that year. The bush & bung marked "Exhibit B," also the lever marked "Exhibit B," signed by the ex'er & annexed or accompanying this dep.

Q. Will you look at the bush now shown to you and say
62 whether you are acquainted with it, and also the wrench used in connection with it; and if so, how long?

A. We have used this bush in the year 1871. It was made by Stiefel, in S't Louis. I think we used it in June and July, 1871. The same is hereto annexed or accompanying this dep'n, & marked "Exhibit C."

Q. Look at the drawing now shown to you, and say whether it represents the screw-bush & Stiefel lever.

A. Yes. (The same is hereto attached and marked "Exhibit D," & signed by the examiner.)

Q. Look at the screw-bush now shown you & say whether you are acquainted with it; & if so, how long.

A. I know this to be the Cornell bush. We used it since 1872, in the spring; 'twas early in the spring when we commenced using it. The same is hereto annexed or accompanying this dep'n, & marked "Exhibit E."

Q. Look at the bush now shown you & say whether you are acquainted with it; and, if so how long.

A. I know this bush to be the Schumacher & Johnson bush; we are using it now. The same is hereto annexed or accompanying this dep'n, and marked "Exhibit F."

EMIL SCHANDEIN.

Deposition of John B. Smith.

JOHN B. SMITH, being duly sworn as a witness on behalf of the defendants, deposes & says:

I reside in the city of Milwaukee, and have resided there 30 years.

63 Q. What is your present occupation, & how long have you been engaged in that business?

A. I am a solicitor of patents, and have been for 16 or 18 years.

Q. Are you familiar with the science of mechanics, and do you regard yourself competent as an expert in relation thereto?

A. I am familiar with mechanics, & have been for 40 years last past, and regard myself as competent as an expert.

Q. Will you look at the paper now shown to you, hereto annexed, marked "Exhibit G," purporting to be a draft of two bung-wrenches designated as A and B, and will you state whether those drafts represent two bung-wrenches with which you are familiar, and what they represent?

A. They are both of them wrenches with which I am familiar. A, I should think, was the wrench of Cornell, the complainant in this suit. B is Shumacher & Johnson's wrench.

Q. Are you familiarly acquainted with the Cornell wrench & with the Schumacher & Johnson wrench?

A. I am acquainted with both of them.

Q. Has your attention been called to those two wrenches with a view to your testifying in this case as an expert, and have you examined the two machines minutely?

64 A. My attention has been called to them and I have examined them particularly as to their character.

Q. Have you examined them with reference to their utility and their identity?

A. I have.

Q. Will you state wherein they agree or disagree, first in their mode of their construction; and second, wherein they agree or disagree in their mode of performing their functions?

A. They agree in their mode of construction by both of them having levers by which they are operated, and both of them applied to the bush in substantially the same manner.

Q How do they differ in their mode of construction, if there is any difference?

A. The lever A is constructed with a V which is applied to the top of the bung, and fits into a notch or recess in the rim of the bush that juts out over the stave of the barrel. The other is constructed with a latch, or shaft, passing down through the center of a cone, or the frustrum of a cone, with a latch on the bottom of the shaft that passes through the cone, which, when it is put into the cone, is turned in, and, after it is put in there, is turned out so as to come in contact with a lip on the bottom of the bush, so that as the bush is turned by the wrench it remains in a fixed position until the latch is turned back again;

65 whilst with the other, or Cornell wrench, it has to be pressed down on to the bush to keep it in position. The Cornell wrench can be taken off of the bush without any change, but in the Schumacher & Johnson wrench it cannot be taken off until the latch is turned back by turning the shaft and moving the latch back into the recess in the cone.

Q. Are there any other differences in the mode of construction or operation of the two machines that now occur to you?

A. In the Cornell wrench the cone seems to be moveable, and the cone held by a bolt and nut by which the frustrum of the cone can be moved up towards the projection V or back from it; but it appears to be held firmly in position as placed, whilst the Schumacher & Johnson frustrum of the cone is a fixture on the lever.

Q. Do you find any similarity or agreement of the projection V on the Cornell machine with the excentric shaft and latch in the Schumacher & Johnson machine? If so, what?

A. I don't see any similarity between them.

Q. Will you now look at Exhibit B, shown to you, and which is attached to the dep'n of Emil Schaudein in this case, and also Exhibit B B, and state, first, wherein the bush agrees or disagrees with the bush of Cornell; and, secondly, wherein they agree or disagree in the construction or operation of the wrench?

66 A. The bush in the first place is an outside and an inside screw without any flange or projection on the top of it, and therefore disagrees with the Cornell bush by being without the flange and notch. There is a bung which screws into the bush with two holes in the top into which fit a couple of projections on the wrench, and when the wrench is on and they are all together it is substantially the same thing as the Cornell wrench and bush.

Q. Will you now look at the bush annexed to Emil Schaudein's dep'n in this case, marked "Exhibit C," and state wherein that agrees in its mode of construction or disagrees with the bush of the complainant?

A. It disagrees with the bush of the complainant by having two notches in the ring; but both notches, or each notch, is substantially the same as the bush of Cornell. All the difference is that this is a square notch and the Cornell is a V-notch.

Q. Do you mean by your answer to the last question that the bush, in its mode of construction and when the wrench is applied to it, is identical in principle with the Cornell wrench?

A. No; because the Cornell wrench has the frustrum of a cone which enters the bush, which prevents its being identical.

Q. Do you mean that the bush in principle is identical with the Cornell bush?

67 A. I should say it was substantially the same thing.

Q. Will you now look at the bush marked "Exhibit F," attached to Emil Schaudien's dep'n in this case, & state wherein it agrees or differs with the bush of Cornell?

A. It agrees with the Cornell bush in having a screw on its outside and having a projecting ring which screws down on to the stave of the barrel. It disagrees with the Cornell bush by not having a V-notch in that projecting ring and in having a projection on its bottom.

Cross-exam'n:

Q. Does the fact that the frustrum of the cone—that part which is inserted into the bush—is, in the defendant's wrench, permanently attached to the lever, while in complainant's wrench the same part can be moved, make any material difference between the two?

A. That does not.

Q. When the latch in defendant's wrench is thrown out so as to engage with the projection from the bush with which it is to be used, does not this latch perform the same office that the V-shaped projection does in complainaat's wrench, and *on* substantially the same manner? Please give your reason for any opinion you may express.

68 A. I do not think it does. My reasons are that with the defendant's wrench it is impossible to screw up the complainant's bush; and it's equally for the complainant's wrench to screw up the bush of the defendant.

Q. Do you mean to be understood as saying in your last answer that the latch does not perform the same office that the V-shaped projection does?

A. If you mean the office of screwing up a bush, or screwing a bush into a barrel, then the two perform the same office.

Q. Defendant's Exhibit B consists of two parts, a metallic bush and a metallic bung. Can you screw either of them into place, or both of them together, either with complainant's wrench or with the defendant's wrench?

A. No, you cannot.

Redirect exam'n:

Q. Do you mean to be understood as saying in your cross-ex'n that the defendant's machine performs its work in substantially a different way from that of the complainant's; or, if not, how do you mean to be understood?

(Objected to as leading and not relating to matters drawn out on cross-ex'n.)

A. I answered that it performed its office substantially different.

69 Q. Why do you say that it performs its office or work substantially different?

A. Because the Cornell wrench with its V is attached to the top of the bush and is permanent in its operation, and the Schumacher & Johnson wrench operates upon the under side of the bush by means of an excentric latch, which is turned out before it can take hold of the bottom of the bush.

Q. Then the reason you assign why it performs its work or office substantially different, is because its construction is substantially different from the complainant's machine?

(Objected to as leading.)

A. Yes, sir.

Recross:

Q. Do you not find in the defendants' wrench all that you find in the complainant's, and something in addition?

A. I do not, for the essential part of the complainant's wrench is wanting in that of the defendants', to wit, the V.

JOHN B. SMITH.

Read over to the witness, and subscribed by him, this 17th day of November, 1873, before me.

EDW. KURTZ,
Examiner in Chancery.

Deposition of William Johnson.

WILLIAM JOHNSON, being duly sworn as a witness on behalf of
70 the defendants, deposes & says:

Q. State whether you are one of the defendants, and what your occupation is, & how long you have been engaged in it.

A. I am one of the defendants. My occupation is a foundryman, and have been engaged in that business about 10 or 11 years.

Q. Have you studied the science of mechanics or the physicial sciences?

A. I have.

Q. Do you regard yourself competent to testify as an expert in matters pertaining thereto?

A. I do.

Q. Are you the inventor of the Schumacher & Johnson's bung-wrench?

A. I am.

Q. Are you acquainted with the complainant's bush and bung wrench?

A. Yes, sir.

Q. How long have you been acquainted with the latter?

A. About 18 or 20 months.

Q. Have you examined the two machines with reference to their identity?

A. I have.

Q. Will you now state wherein they agree in their mode of construction, or their mode of operation, or wherein they differ in those respects?

71 A. The' differ materially in device. In the complainant's wrench the power is all thrown on the projection V on the wrench, none on the cone; the other wrench, the power is all applied on the latch against the cone. They are different in complicity of number of pieces; the Cornell wrench having four pieces, and ours put together with three.

Q. Are you acquainted with the bung and bush marked "Exhibit B," and the bush marked "Exhibit C," attached to dep'n of Emil Schaudein in this case, and state how long you have known them, and whether they have been in use in this city, & how long.

A. This Exhibit B, I have known since about August 10th, 1870. It was used in some of the breweries here at that time. This Exhibit C, it is about a year & a half since I first saw. I saw it in use & put in kegs at Best's brewery.

WM JOHNSON.

Read over to the witness & subscribed by him before me this 17th day of November, 1873.

EDW. KURTZ,
Examiner in Chancery.

Deposition of Frederick Miller.

TUESDAY, *November 18th*, 1873.

Present, same counsel before mentioned.

FREDERICK MILLER, being duly sworn as a witness on behalf of the defendants, deposes & says:

72 Q. Look at Exhibit A, now shown to you, annexed to Emil Schaudein's dep'n in this case, & state whether you have been acquainted with the bush; and, if so, how long, & whether it was in use.

A. I have been acquainted with it and have used it, since the year 1867.

Q. Look at Exhibit B, and B B, now shown you, attached or accompanying Emil Schaudein's dep'n in this case, & state whether you have been acquainted with the bush-bung & wrench; and, if so, how long, & whether it was in use.

A. I am acquainted with them, and saw them first in Chicago about

five years ago. The man that showed it to me, at my brewery, put it in three barrels. I saw it in M'r Hook's brewery, in Chicago, some four years ago.

Q. Look at Exhibit C, now shown you, attached to or accompanying Emil Schaudein's dep'n in this case, & state whether you have been acquainted with the bush; and, if so, how long, & whether it was in use.

A. About this bush I do not know so much. I have seen it, I think, about three years ago in use by other brewers.

FREDERICK MILLER.

Deposition of Adam Loeffelholz.

ADAM LOEFFELHOLTZ, being duly sworn as a witness on behalf of the defendants, deposes & says:

73 *Q.* I reside in Milwaukee and have resided there since 1856; am a locksmith by occupation. I am acquainted & informed in the science of mechanics; have made it a study some 30 years.

Q. Are you acquainted with the bung-wrench of Cornell, the complainant, and with that of the defendants in this suit?

A. I am.

Q. Will you state, in your opinion, what the differences are, if any, in the two machines?

A. I claim that the Schumacher & Johnson wrench is entirely different in construction from that of the complainant. The notch or the projection on complainant's machine takes hold of the flange of the bush in order to screw in the bush, while the defendants' machine, with its eccentric movement cannot be used unless the eccentric part is brought to the proper point by throwing the latch out. On account of this eccentric part here I am positive that this wrench is an entirely different wrench from that of the complainants. The defendants' wrench cannot be used on the complainant's bush, nor the complainant's wrench on the defendants' bush.

Q. Look at Exhibits C and E, attached to or accompanying Emil Schaudein's dep'n in this case, and state wherein the two bushes agree or are different in their construction or mode of operation when acted upon by a lever or wrench.

74 A. In construction the bushes are the same except that C has two notches and E has only one. On the bush marked "Exhibit C," you want two pins on the bar to screw it in, while on Exhibit E the one notch answers same purpose.

Q. When the lever is applied to each of the machines and operated, is the effect the same upon each of the machines or different? If so, how different?

A. The effect is the same.

Cross-exam'n:

Q. When the defendants' wrench is applied to their bush & operated, is not the effect the same as when the complainant's wrench is applied to his bush & operated?

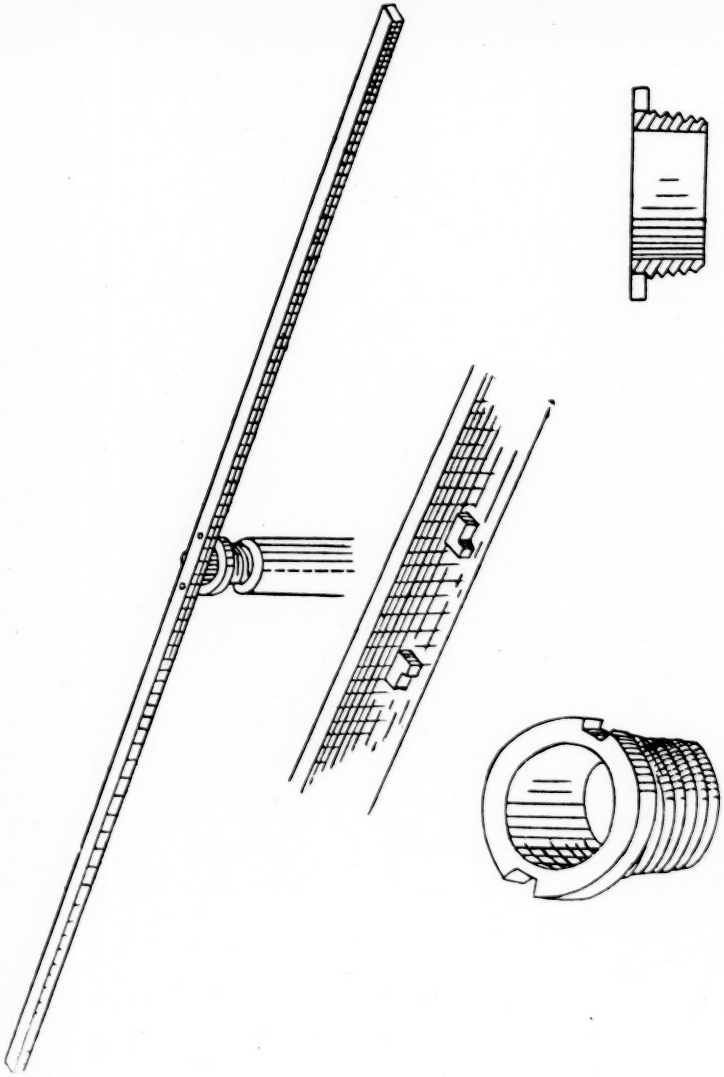
A. It is.

Q. Do you understand that Exhibit D correctly represents the kind of wrench which was used with the bush Exhibit C?

A. I think it does.

ADAM LOEFFELHOLZ.

75 EXHIBIT D.—EDW. KURTZ, *Examiner.*



DAMAGES.

This case affords another illustration of the difficulty of determining any rule in advance, for the measurement of damages, as stated by this Honorable Court, in Seymour vs. McCormick, 16 Howard, on p. 489. And it shows that each case must, while governed by general principles, be largely determined by its own peculiar surroundings and position in the art.

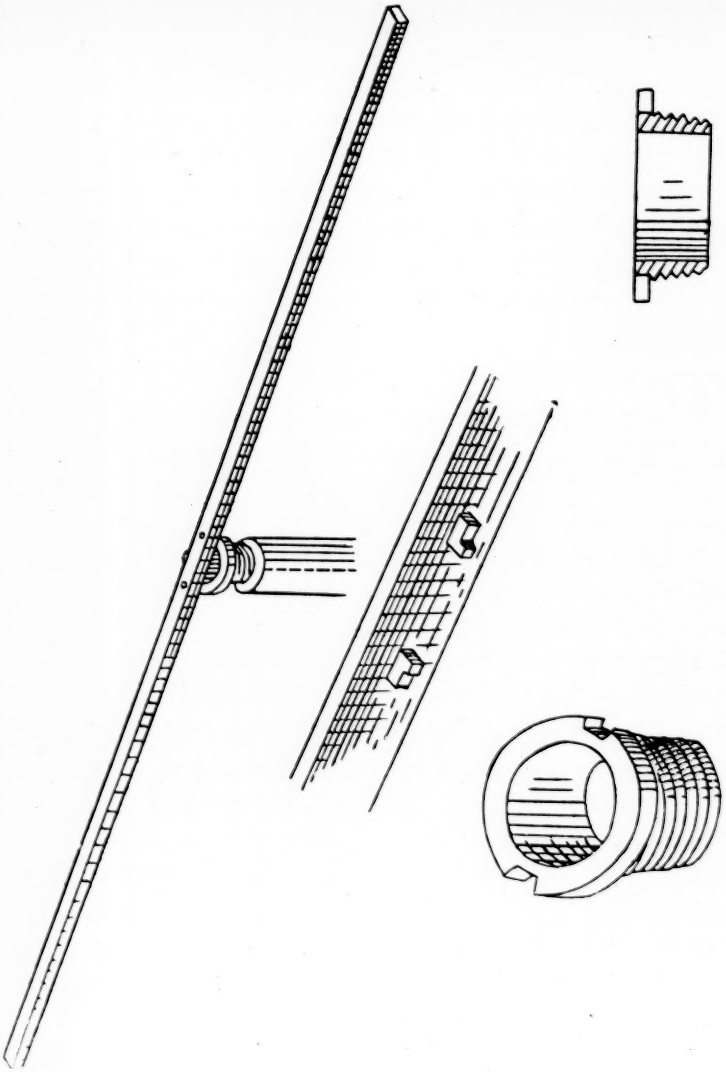
It is admitted that there are difficulties in the case, and the most of them peculiar to it, and while one minor dictum of the Master cannot on principle be sustained, we think that it will be found, that while some of the reasoning may be bad, the general award or allowance, will be found to be substantially correct and below rather than above the amount properly due, and that it is fully justified by the proofs.

It appears from the art as shown in the record, that the patented tool is new; that its novelty and value, largely consists in the introduction of the new part—the supporting core; and that the product of all of the parts is a new special tool, for the special purpose of accurately inserting hollow screws, or bung linings, or as they are commonly designated "bushes," and so strongly inserting them, that no liquids or gasses can escape between the metal and the wood.

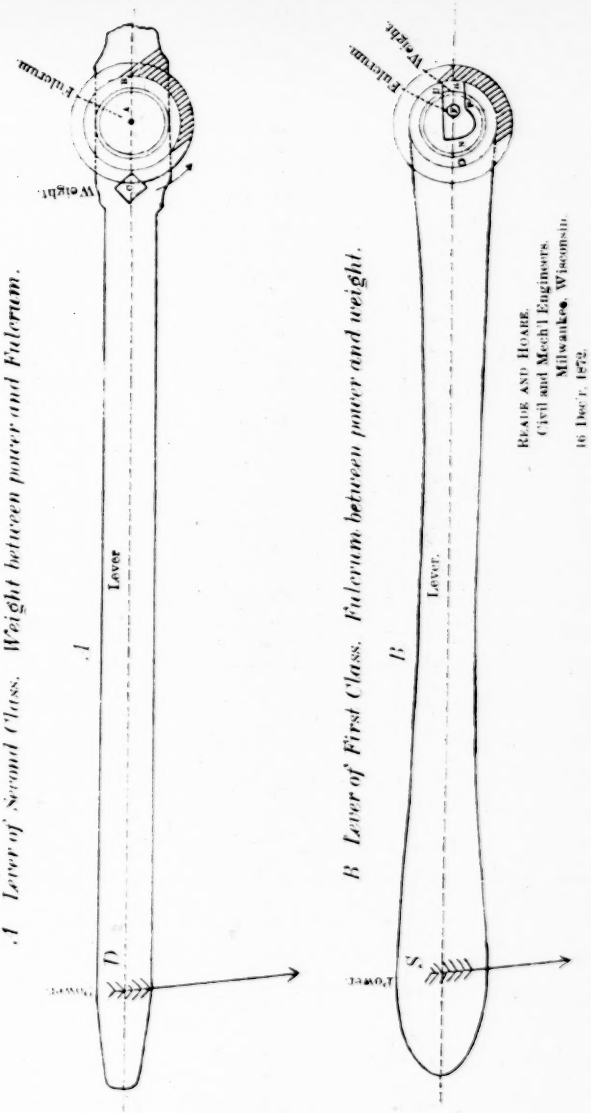
The use of this new tool is quite limited by reason of its being a special tool, for a special purpose, therefore the infringement is a special hardship. Its use is not only limited by its not being a tool for general use, but it is also limited by its own wearing qualities or endurance, as one wrench will last a lifetime, and will insert at least 100,000 bushes without repairing.

Cornell. p. 67. Wagner, p. 83.

75 EXHIBIT D.—EDW. KURTZ, *Examiner*.



76 EXHIBIT G.—EDW. KURTZ, *Examiner.*



77 UNITED STATES OF AMERICA,
Eastern District of Wisconsin, ss :

I, Edward Kurtz, an examiner in chancery of the circuit court of the United States for the eastern district of Wisconsin, do hereby certify

that the foregoing depositions of Emil Schauein, John B. Smith, William Johnson, Frederick Miller, and Adam Leffelholz, were taken before me, pursuant to notice duly given by the counsel for the defendants in said cause and an order made by me, which are hereto annexed: that I was attended by the counsel of the repective parties at the times and place as stated in the caption of said lepositions, and by the said witnesses; and that the said witnesses, bing of sound mind and lawful age, were, before the commencement of he taking of their depositions, by me duly and publicly sworn to testiy the truth, the whole truth, and nothing but the truth in the cause aforesaid, and that the testimony as given was reduced to writing by me in presence of said witnesses respectively, and from their statements, and in presence of said counsel, and that said depositions, when completed, were carefully read over to said witnesses respectively and subscribed by them in my presence & in presence of said counsel.

I further certify that I am not of counsel or solicitor for either of the parties in the caption of said depositions named, nor in anywise
78 interested in the event of said cause.

I further certify that Exhibits D and G referred to in said depositions were produced before me, and are annexed to said depositions and that Exhibits A, B, & B B, C, E, and F were produced before me and accompany the same separately, they being too heavy and bulky to be annexed.

In testimony whereof I have hereunto set my hand this 24th day of November, A. D. 1873, and of the Independence of the United States the 98th.

EDWARD KURTZ,
Examiner in Chancery.

79 United States circuit court, eastern district of Wisconsin.

GEORGE B. CORNELL
vs.
EILERT SCHUMACHER AND WILLIAM JOHNSON.

At the city of Chicago, county of Cook, State of Illinois, on this 21st day of November, A. D. 1873.

It is hereby stipulated by the solicitors for the complainant and defendants that the deposition hereunto annexed may be read in evidence on the hearing of this cause with like force and effect as if the same had been taken in accordance with the rules of this court, subject to the right to object to any part thereof for incompetency or irrelevancy.

WEST & BOND,
Sol'rs for Comp't.
FINCHES, LYNDE, & MILLER,
Sol'rs for Defendants.

Deposition of E. L. M. Hoare.

EDWARD L. M. HOARE, a witness produced on behalf of the defendants, being first duly sworn, deposes and says, in answer to interrogatories to him propounded by A. Finch, esq., of counsel for defendants, as follows:

Int. 1. Where do you reside, and what is your occupation?
80 Ans. 135 Center avenue, Chicago; civil and mechanical engineering.

Int. 2. How long have you been engaged in that business?

Ans. Twenty years.

Int. 3. What advantages have you had in acquiring knowledge of mechanical or physical sciences?

Ans. I served my time for mechanical and mining engineering in one of the largest iron-works in South Wales, and completed my education for civil and mechanical engineer under one of the leading London firms. I was civil engineer in India for five years.

Int. 4. Do you regard yourself as competent to testify as an expert in the science of mechanics?

Ans. Yes.

Int. 5. Will you now look at a paper marked "Exhibit G," annexed to depositions taken in this cause, and state what the drawings are intended to represent, and do represent? And state wherein the two machines agree in their construction & mode of operation, and wherein they differ in those respects.

Ans. In the drawings marked "A" and "B," on the paper referred to, I find that the machine marked "A" is a lever of the second
81 class, where the weight is between the power and fulcrum, the fulcrum being in the center of the core A, the power applied at D, the point of the application of the weight or resistance to be overcome being upon the diamond-shaped projection C, *were* in contact with the faces of the slot cut in the outer circumference or rim of the bush B, (as shown by dotted red lines.) I find also that the power and resistance in the machine A act in the same direction, by virtue of the construction of the machine.

Second. The machine marked "B" is a lever of the first class, where the fulcrum is between the power and the weight, the fulcrum being in the center of the core N; the power applied at S, the point of application of the weight or power of resistance to be overcome being along the red arrow line, passing from Q, on the raised portion of the core, through the eccentric movable counter-brace R into the raised portion U of the bush O. In the machine B the power and resistance must act, and, by virtue of its construction, can act but in opposite directions, as shown by the red arrow lines.

With reference to the mechanical construction of these machines,
82 I find that in the machine A the applied power is made operative through the stationary diamond-shaped projection C, and imparts its required force through contact with the faces of the slot cut in the outer rim of the bush B; while in the machine B the applied power operates through the contact of the raised portion Q of the core N with a movable eccentric counter-brace R, and also with the raised portion U of the bush O upon the inner portion of the bush O. The counter-brace R being eccentric in that it is pivoted upon the bolt P, which is off from the center of the core U. By virtue of this construction, the brace R receives an eccentric motion with reference to the fulcrum in the center of the core N, and upon the movable counter brace R, and its proper location and construction, depends the entire effectiveness of this machine, as it will readily be seen that were its construction materially changed, or were its location changed so that it would not be in contact with Q and U, the machine would be entirely inoperative. As the machines A and B embody and constitute distinct and different lever powers (in either case) they are not mechanically alike; and as the construction is, as has been described, entirely different,
83 the effectiveness of the machines in either case depending upon the difference in construction existing between them. As in the

machine B the counter-brace or latch R acts as a connecting-link for the transmission of the power through and from the cone N to the raised portion Q of the bush O, and is entirely different in construction and mode of operation from the raised diamond-shaped projection C of the machine A, hence they are not substantially the same in mechanical construction and mode of operation.

Int. 6. Did you make the drawings of the two machines in Exhibit G, and at my request?

Ans. Yes, sir. It was made on the 16th day of December, 1872, in Milwaukee, where I then resided. The drawing was made from a lever of each kind shown me by Mr Finch.

Int. 7. Did you at that time, at my request, make a thorough examination of the mechanical construction and their mode of operation?

Ans. Yes. I took sufficient time to examine thoroughly both levers.

Int. 8. Is the projection on the bottom of defendants' bush the
84 same in principle as the V-slot in the rim of complainant's bush; and, if you say not, will you give the reasons why they are not the same?

Ans. No; certainly not. The complainant's bush has a slot in the rim, which tends to weaken the rim; while in the defendants' bush the rim is left perfect. In the complainant's bush the inner portion has a plain surface, while the defendants' bush has a raised projection, against which the counter-brace or latch acts, which, if anything, gives it additional strength.

Int. 9. Are you acquainted with what is called the Steifel bush?

Ans. Yes, sir.

Int. 10. Will you state wherein that bush, as represented in Exhibit D, annexed to depositions taken in this cause, agrees in the principles of its construction, or wherein it differs from that of the complaintant's bush?

Ans. Practically there is little or no difference in the bush. It is substantially the same.

Cross-examination of said witness by E. A. West, esq., of counsel for complainant:

X-int. 1. You have stated that you think that the wrench represented by the drawing A in Exhibit G is a lever of the second class,
85 and the other is a lever of the first class. If that were the only difference between the two, do you think that would be material?

Ans. It would be a material difference in a mechanical point of view. Practically it would not make so great a difference in the lever or wrench A, because the diamond-shaped wedge could be so changed as to make it a lever of the first class, but not without materially changing the construction.

X-int. 2. If the diamond or V-shaped projection on this wrench A should be placed upon the other side of the core, would the instrument so changed be substantially the same as that represented by the drawing A, or would it be a substantially different instrument from that?

Ans. It would change the classification of the instrument, but in every other respect it would be substantially the same.

X-int. 3. When the latch or counter-brace R is turned out so as to engage with the projection on the lower end of the bush, is not the operation of the wrench B the same as that of A?

Ans. No, sir. The action of wrench A is on the outer rim of the bush, while that of B is on the bottom of the bush.

86 X-int. 4. When the wrench B is in use does not the latch or

brace R take the place of and perform the same office as the V-shaped projection does in the wrench A?

Ans. The only similarity at all would be in the purpose of screwing the bush home, which must be the same in all wrenches, however applied; but they are mechanically plainly different. The latch R does not take the place of the V-shaped projection.

E. LE M. HOARE.

Rec. of A. Finch ten dollars for witnees fees in this case.

E. LE M. HOARE.

Subscribed and sworn to before me this 21st day of November, A. D. 1873.

[SEAL.] O. W. BOND,
Notary Public.

STATE OF ILLINOIS,
County of Cook, City of Chicago:

I, Oscar W. Bond, a notary public in and for the city of Chicago, in the county and State aforesaid, do hereby certify that the foregoing deposition of Edward Le M. Hoare was taken by and before me, pursuant to the annexed stipulation, at the time and place therein specified; that the parties to the said cause were present at the taking of the same, defendants by their counsel, A. Finch, esq., and complainant by his
87 counsel, E. A. West, esq., as therein appears; that before testifying the said Edward Le M. Hoare was by me duly sworn to testify the truth, the whole truth, and nothing but the truth in the cause aforesaid; that his deposition was by me reduced to writing, and the same duly subscribed and sworn to before me, as therein appears.

And I do further certify that I am neither attorney nor of counsel for any of the parties in said deposition or caption named, and am in no wise interested in the result of said cause.

In testimony whereof I have hereunto set my hand and notarial seal this 21st day of November, A. D. 1873.

[SEAL.] O. W. BOND,
Notary Public.

My charges for taking the said deposition, five (5) dollars, paid by A. Finch, esq., counsel for defendants.

O. W. BOND,
Notary Public.

88 Circuit court United States, eastern district of Wisconsin. In equity.

GEORGE B. CORNELL, COMPLAINANT,
against
EILERT SCHUMACHER, WILLIAM JOHNSON, DEFENDANTS.

It is hereby stipulated and agreed by and between the solicitors for complainant and the defendants in the above-entitled cause that the testimony of Charles Steifle, of S't Louis, in the State of Missouri, may at any time hereafter be taken upon the direct interrogatories hereunto annexed by the said defendants, and upon cross-interrogatories to be annexed by complainant if disposed so to do, at the time of signing this stipulation, before any United States court commissioner, master or examiner in chancery, or notary public residing in said city of S't Louis.

And it is further stipulated and agreed that the testimony so taken may be read upon the hearing of said cause as evidence therein with the same binding force and effect as if the same had been taken upon a commission in accordance with the rules and practice of said court;
89 subject, however, to any objections thereto for incompetency or irrelevancy.

And it is further stipulated and agreed that the deposition so to be taken shall be returned into court with all convenient speed, & before the first Monday of January next, and that the complainant, upon the return thereof, shall, if desired, have reasonable time to take any testimony by way of rebutting the same.

Dated 28th November, 1873.

FINCHES, LYNDE & MILLER,
Solicitors for Defendants.

WEST & BOND,
Sol'rs for Compl.

Interrogatories propounded by defendants to Charles Steifle, of the city of S't Louis, a witness to be produced and sworn on the part of said defendants, under and in pursuance of stipulation hereunto annexed.

Imprimis. What is your age, occupation, and place of residence?

Second. How long have you resided in S't Louis and how long have you been engaged in your present occupation or business?

Third. Look upon the paper hereunto annexed and marked "Exhibit A," and state whether or not the drawings thereon represent a bung-bush; also whether or not the drawing represents a bush-bung wrench.

90 Fourth. If, in answer to the third interrogatory, you answer and say that *that* the drawings represent a bung-bush and also a bush-bung wrench, then state—

1st, whether you are acquainted with them; &, if so—

2d, how long have you known them;

3d, whether they have been in use for the purposes intended, and, if so, how long have they been so used, and where and by whom;

4th, of what material were they made;

5th, if known to you, state who was the inventor;

6th, if known to you, state whether they have been patented, & by whom and when.

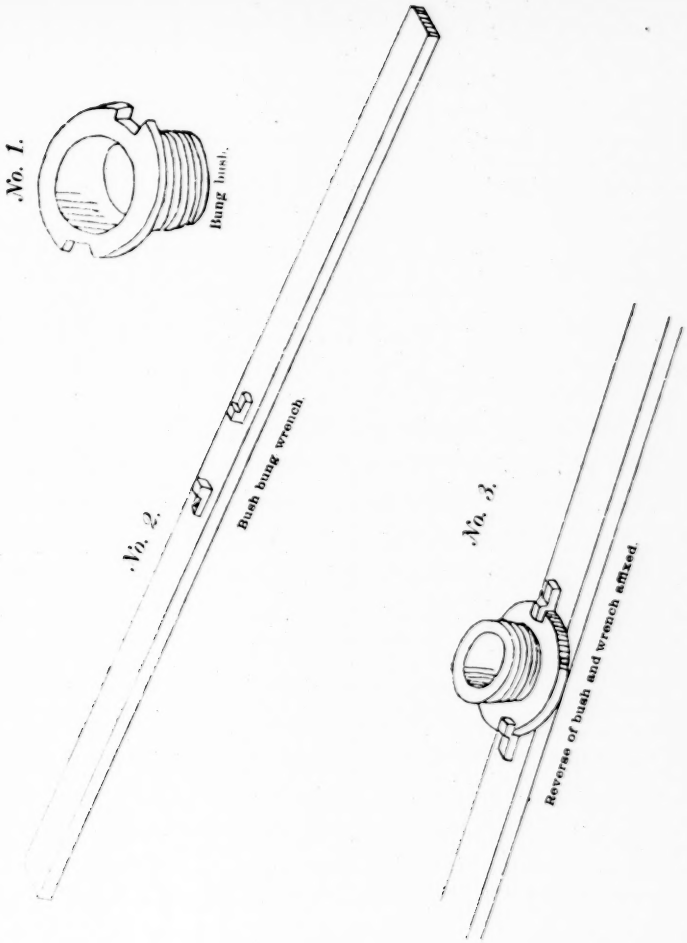
Lastly, do you know any other matter or thing that would be of benefit or advantage to the said defendants; if so, state the same as fully as if you were herein particularly interrogated in relation thereto.

FINCHES, LYNDE & MILLER,
Solicitors for Defendants.

Cross-interrogatories waived.

WEST & BOND,
Sol'rs for Comp't

91 EXHIBIT A.


No. 1.
Bung hole.
No. 2.
Bush bung wrench.
No. 3.
Reverse of bush and wrench affixed.

92 *Deposition of Charles D. Stifel.*

Circuit court of the United States, east. dist. of Wisconsin. In equity.

GEORGE B. CORNELL, COMPL'T,
vs.
EILERT SCHUMACHER, W'M JOHNSON, DEF'TS.

The deposition of Charles D. Stifel, a witness on the part of said defendants, taken by and before the undersigned, J. S. Garland, a notary public within and for the county of S't Louis and State of Missouri, residing in the city of S't Louis, under and by virtue of the annexed stipulation and agreement by and between the solicitors of the parties to the above-entitled cause, in the city of S't Louis, county of S't Louis and State of Missouri, on the 11th day of December, 1873, at the office of Garland & Green.

The said CHARLES G. STIFEL, having been first duly sworn, in response to the interrogatories, respectively, testified:

To the first interrogatory he saith: I am fifty-four years of age. I am a brewer. I reside in S't Louis.

To the second interrogatory he saith: I have resided in S't Louis for twenty-four years, and have been a brewer for that length of time.

To the third interrogatory he saith: I have looked at the paper
93 marked "Exhibit A," and find that it is a correct drawing of the invention of myself and M'r G. Brecht, and known as "Stifel's bung-bush," and the drawing also represents a bung-bush wrench.

To the fourth interrogatory he saith: I am acquainted with them; I have known them about six years; when I commenced experimenting on them was in 1867. They have been in use for the purposes intended by them for at least five years in this city, and for between four and five years in the country at Quincy, Ill's, & for four years they have been in use in Cincinnati, Ohio. They are made of iron and have always been made of that material. Stifel—that is, myself—and G. Brecht were the inventors of them. I applied for a patent for them in the name of Stifel & Brecht, through a patent solicitor, who filed the application in Washington, D. C., five years ago, and the application for a patent is still pending.

To the last interrogatory he saith: I am confident that M'r Brecht and myself were the first inventors in this country of the bush having a screw to be screwed into the barrel, and the first, I believe, to apply for
a patent on it. The Stifel bush and wrench above mentioned
94 have been and still are used by seven or eight brewers in this city, and they have been in use by the brewers in Macon City, Mo., in Quincy and Highland, Ill's, and in Cincinnati, Ohio, from two to five years in these different places.

CHA'S G. STIFEL.

Subscribed and sworn to before me this 11th day of December, 1873.
[SEAL.] J. S. GARLAND,
Notary Public.

STATE OF MISSOURI,
County of S't Louis, ss:

I, J. S. Garland, notary public within and for the county of S't Louis and State of Missouri, residing in the city of S't Louis, do hereby cer-

tify that the above deposition of Charles G. Stifel was taken before me, at the office of Garland & Greene, in the city of S't Louis, on the 11th day of December, 1873, between the hours of nine and eleven o'clock in the forenoon; that the said deposition was taken on behalf and at the request of the defendants in the above-entitled cause, upon the stipulation and interrogatories hereto annexed and reduced to writing by myself; that the said deponent was, before his examination, sworn to tes
tify the truth, the whole truth, and nothing but the truth relative
95 to said cause; and that said deposition was carefully read over to said deponent by me, and then subscribed by him on the day and at the place and between the hours aforesaid.

In testimony whereof I have hereunto set my hand and official seal this 11th day of December, 1873.

[SEAL.]

J. S. GARLAND,
Notary Public S't Louis County, Mo.

96 No. 133536.

The United States of America to all to whom these presents shall come:

Whereas William Johnson, of Milwaukee, Wisconsin, has presented to the Commissioner of Patents a petition praying for the grant of letters-patent for an alleged new and useful improvement in wrenches, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and whereas upon due examination made the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters-patent are to grant unto the said William Johnson, his heirs or assigns, for the term of seventeen years from the third day of December, one thousand eight hundred and seventy-two, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this third day of Decem er, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the
97 United States of America the ninety-seventh.

SEAL OF THE PATENT OFFICE OF U. S.

B. COWAN,
Acting Secretary of the Interior.

Countersigned:

M. D. LEGGETT,
Commissioner of Patents.

92 *Deposition of Charles D. Stifel.*

Circuit court of the United States, east. dist. of Wisconsin. In equity.

GEORGE B. CORNELL, COMPL'T,
vs.
EILERT SCHUMACHER, W'M JOHNSON, DEF'TS.

The deposition of Charles D. Stifel, a witness on the part of said defendants, taken by and before the undersigned, J. S. Garland, a notary public within and for the county of S't Louis and State of Missouri, residing in the city of S't Louis, under and by virtue of the annexed stipulation and agreement by and between the solicitors of the parties to the above-entitled cause, in the city of S't Louis, county of S't Louis and State of Missouri, on the 11th day of December, 1873, at the office of Garland & Green.

The said CHARLES G. STIFEL, having been first duly sworn, in response to the interrogatories, respectively, testified:

To the first interrogatory he saith: I am fifty-four years of age. I am a brewer. I reside in S't Louis.

To the second interrogatory he saith: I have resided in S't Louis for twenty-four years, and have been a brewer for that length of time.

93 To the third interrogatory he saith: I have looked at the paper marked "Exhibit A," and find that it is a correct drawing of the invention of myself and M'r G. Brecht, and known as "Stifel's bung-bush," and the drawing also represents a bung-bush wrench.

To the fourth interrogatory he saith: I am acquainted with them; I have known them about six years; when I commenced experimenting on them was in 1867. They have been in use for the purposes intended by them for at least five years in this city, and for between four and five years in the country at Quincy, Ill's, & for four years they have been in use in Cincinnati, Ohio. They are made of iron and have always been made of that material. Stifel—that is, myself—and G. Brecht were the inventors of them. I applied for a patent for them in the name of Stifel & Brecht, through a patent solicitor, who filed the application in Washington, D. C., five years ago, and the application for a patent is still pending.

To the last interrogatory he saith: I am confident that M'r Brecht and myself were the first inventors in this country of the bush having a screw to be screwed into the barrel, and the first, I believe, to apply for

94 a patent on it. The Stifel bush and wrench above mentioned have been and still are used by seven or eight brewers in this city, and they have been in use by the brewers in Macon City, Mo., in Quincy and Highland, Ill's, and in Cincinnati, Ohio, from two to five years in these different places.

CHA'S G. STIFEL.

Subscribed and sworn to before me this 11th day of December, 1873.
[SEAL.] J. S. GARLAND,
Notary Public.

STATE OF MISSOURI,
County of S't Louis, ss:

I, J. S. Garland, notary public within and for the county of S't Louis and State of Missouri, residing in the city of S't Louis, do hereby cer-

tify that the above deposition of Charles G. Stifel was taken before me, at the office of Garland & Greene, in the city of S't Louis, on the 11th day of December, 1873, between the hours of nine and eleven o'clock in the forenoon; that the said deposition was taken on behalf and at the request of the defendants in the above-entitled cause, upon the stipulation and interrogatories hereto annexed and reduced to writing by myself; that the said deponent was, before his examination, sworn to tes
tify the truth, the whole truth, and nothing but the truth relative
95 to said cause; and that said deposition was carefully read over to said deponent by me, and then subscribed by him on the day and at the place and between the hours aforesaid.

In testimony whereof I have hereunto set my hand and official seal this 11th day of December, 1873.

[SEAL.]

J. S. GARLAND,
Notary Public S't Louis County, Mo.

96 No. 133536.

The United States of America to all to whom these presents shall come:

Whereas William Johnson, of Milwaukee, Wisconsin, has presented to the Commissioner of Patents a petition praying for the grant of letters-patent for an alleged new and useful improvement in wrenches, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and whereas upon due examination made the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters-patent are to grant unto the said William Johnson, his heirs or assigns, for the term of seventeen years from the third day of December, one thousand eight hundred and seventy-two, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this third day of Decem[illegible]er, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the
97 United States of America the ninety-seventh.

SEAL OF THE PATENT OFFICE OF U. S.

B. COWAN,
Acting Secretary of the Interior.

Countersigned:

M. D. LEGGETT,
Commissioner of Patents.

98 W. JOHNSON.

Wrench.

No. 133,536.—Patented Dec. 3, 1872.

Fig. 1.

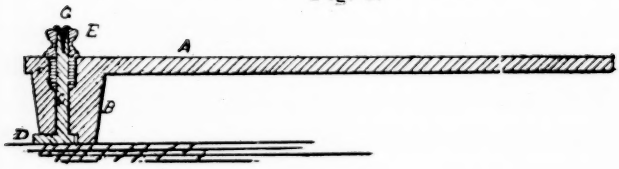
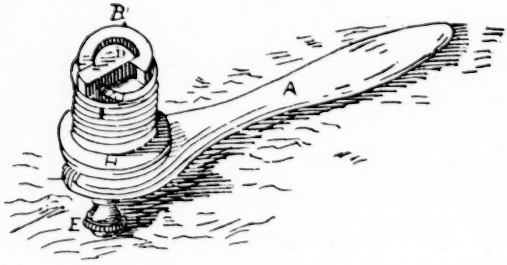


Fig. 2.



Inventor:

WILLIAM JOHNSON.

Witnesses:
J. B. SMITH.
E. J. SMITH.

99 UNITED STATES PATENT-OFFICE.

William Johnson, of Milwaukee, Wisconsin. Improvement in wrenches. Specification forming part of letters-patent No. 133536, dated December 3, 1872.

To all whom it may concern:

Be it known that I, William Johnson, of Milwaukee, in the county of Milwaukee and in the State of Wisconsin, have invented certain improvements in wrench, of which the following is a specification:

NATURE AND OBJECT OF THE INVENTION.

My invention is a wrench to screw bung-bushings into beer-barrels, and fits into the opening and strikes against a projection on the bushing at the inner end of the bush, thus preserving the whole strength of the bushing. The notch on the outer side of the bushing, which weakens it, is avoided.

DESCRIPTION OF THE DRAWING FORMING PART OF THIS SPECIFICATION.

Figure 1 is a sectional view of the wrench; Fig. 2, a perspective view of the wrench and bushing.

GENERAL DESCRIPTION.

A is the handle of the wrench; B, the projection which fits into the inside of the bushing; C, a rod which runs down through the projection B in a hole nearer one side than the other; D, a piece on the end of the rod C which fits into a recess in the bottom of B; E, a knob on the top of rod C; F, spring on rod C, under knob E, which holds the rod C up in place; G, a screw in the top of rod C which holds knob E on securely in place; H, the bush; I, the projection on the bottom of the bushing which the part of the wrench D strikes against to screw the bushing into place.

The operation of this wrench is as follows: The part B is placed in the bush, and the operator then takes hold of the knob E and turns it, and as it turns the part D at the bottom is turned out and catches against the projection I in the bushing, and then the handle A and the bush will turn with it and be screwed home.

CLAIM.

The combination and arrangement of projection B, rod C, piece D, and knob E, substantially as and for the purpose set forth.

WILLIAM JOHNSON.

Witnesses:
J. B. SMITH,
E. J. SMITH.

100 And afterwards, to wit, at a stated term of said court begun and held according to law, at the city of Milwaukee, on the first Monday (being the fifth day) of January, A. D. 1874, and on the 48th day of said term, to wit, on the 7th day of March, 1874, (present, the Hon. Thomas Drummond, circuit judge, presiding,) the following proceedings were had, to wit:

Interlocutory decree & order of reference to master.

GEORGE B. CORNELL, COMPLAINANT,
vs.
EILERT SCHUMACHER & WILLIAM JOHNSON, defendants. } In equity.

This cause having been heretofore brought to a hearing upon the pleadings and proofs, and counsel for the parties respectively having been heard thereupon, and the same having been duly considered by the court, it is ordered, adjudged, and decreed as follows:

First. That the said letters patent on which this suit is brought, granted to said George B. Cornell, designated as re-issue number 5026, dated August 6th, 1872, (the original having been granted to said Cornell as assignee of himself and John B. Lacey, and dated August 29th, 1871,) are good and valid and still in force, and owned by the said complainant.

101 Second. That the defendants, Eilert Schumacher and William Johnson, have violated and infringed upon the said rights of the said complainant under the said re-issued letters-patent, as in said bill set forth.

Third. That the said complainant is entitled to a discovery and account from the said defendants, Eilert Schumacher and William Johnson, of all gains and profits accruing to and realized by them from and in consequence of their aforesaid violation and infringement of the said letters-patent, and the said rights of the complainant thereunder, and is entitled to recover from said defendants such gains and profits, and in addition thereto the damages the complainant has sustained by such violation and infringement of his said rights. And it is further ordered that this cause be referred to M'r Francis Bloodgood, one of the masters of this court, to compute and ascertain and to take and state an account of all gains, profits, and advantages accruing to and realized and received by the said defendants by reason of the infringement of the said letters-patent and the complainants' rights thereunder, and in addition thereto assess the damages sustained by the complainant by reason of said infringement to the date of his report. And the master is directed to take proofs upon the above mentioned matters and to report the
102 same, together with said account and assessment of damages, with all convenient speed. And he is authorized to require the production of the bo ks of account of said defendants and to examine the defendants and others, on oath, touching the matters hereby referred to him. The proofs already taken in said cause, or agreed to be used by stipulation therein, may be used in said reference, and other testimony may be taken in accordance with the practice of the court, and under the rules thereof. And further directions are reserved until the coming in of said report.

JUNE 24, 1874.—This day came the defendants, by their counsel, and presented to the court their petition for a rehearing, as herein filed, as follows:

Petition for rehearing.

Circuit court of the United States, eastern district of Wisconsin. In equity.

GEORGE B. CORNELL, COMPLAINANT,
against
EILERT SCHUMACHER AND WILLIAM JOHNSON, defendants.

To the judges of the circuit court of the United States for the eastern district of Wisconsin:

Your petitioners, the above-named defendants, respectfully
103 show and submit that they are aggrieved by an interlocutory order or decree lately made in the above-entitled cause, whereby it was decreed that the letters-patent of complainant were good and valid, and that your petitioners had infringed; whereas your petitioners believe upon the evidence the decree should have been that your petitioners had not infringed nor were infringers of the device described in said complainant's letters-patent.

And your petitioners further show and submit that subsequent to the

hearing of said cause they discovered testimony which they are advised by counsel and verily believe it very material and pertinent to the issue in said cause, and which is not cumulative, and which they believe if it had been before the court at the hearing that the decree would have been for your petitioners instead of in favor of the complainant. That the nature of said testimony is hereinafter particularly set forth, that is to say, on or about the 27th day of May last they discovered for the first time that a device had been invented for the purpose of bushing bung-holes, embodying substantially all the elements or ingredients, especially the shank projection and cone or its mechanical equivalent of the supposed invention of the said complainant; and your
104 petitioners are informed and verily believe that is in principal the same wrench as that of complainant's, and that it has fully anticipated the complainant's supposed invention or machine; that the same was well known at the Patent-Office, at Washington, long prior to the original and re-issued patent of said complainant; and that the same was likewise known prior thereto & in use in West Troy, in the State of New York.

And your petitioners further show and submit that on or about the 19th day of January, 1869, a patent was duly issued at the Patent-Office, at Washington, and which is numbered 85903, and in which, or the specifications annexed thereto, the complainant's wrench is fully described as applied to bushing, though the patent itself does not cover the wrench.

And your petitioners herewith submit a certified copy of patent and specifications likewise, which, & other models, will fully explain the invention thus patented & the wrench for inserting bushes, but which are too bulky or cumbersome to annex hereto.

And your petitioners further submit and show that they used due diligence in preparing said cause for a hearing, and employed
105 competent agents to make examination at the Patent Office at Washington for evidence pertinent to the defence of your petitioners, but who failed to make discovery of the patent and the wrench as aforesaid described until at or about the time as before set forth.

In view of the premises your petitioners humbly pray that a rehearing of said cause may be had upon the whole case, and particularly upon the newly-discovered testimony as aforesaid detailed, and they further pray that all proceedings may be stayed until the further order of the court, & that such other and further relief may be granted as shall be agreeable to equity.

EILERT SCHUMACHER.
WILLIAM JOHNSON.

FINCHES, LYNDE & MILLER,
D'fts' Solicitors.
A. FINCH, *Of Counsel.*

EASTERN DISTRICT OF WISCONSIN, *ss:*

I, William Johnson, being duly sworn, do depose and say that I have heard read the foregoing petition and know the contents thereof, and that the same is true in substance & in fact.

WILLIAM JOHNSON.

Sub[scribed] & sworn to before me this 8th day of June, A. D. 1874.
[SEAL.] WILLIAM H. MORRIS,
Notary Public Milwaukee Co., Wisconsin.

(65.)

The U. S. Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters-patent granted Walter Calhoun, dated January 19th, 1869, No. 85903, for "improvement in bungs."

In testimony whereof I, J. M. Thacher, acting Commissioner of Patent, have caused the seal of the Patent-Office to be hereunto affixed this twenty-third day of April, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-eighth.

SEAL OF PATENT-OFFICE OF THE U. S.

J. M. THACHER,
Acting Commissioner.

No. 85903.

The United States of America to all to whom these letters-patent shall come:

Whereas Walter Calhoun, of West Troy, New York, has alleged that he has invented a new and useful improvement in bungs, and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to his knowledge and belief, been
107 previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are, therefore, to grant to the said Walter Calhoun, his executors, administrators, or assigns, for the term of seventeen years from the nineteenth day of January, one thousand eight hundred and sixty-nine, the full and exclusive right and liberty of making, using, and vending to others to be used, the said improvement, a description whereof is given in the annexed schedule and made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office to be hereunto affixed. Given under my hand, at the city of Washington, this nineteenth day of January, in the year of our Lord one thousand eight hundred and sixty-nine, and of the Independence of the United States of America the ninety-third.

[L. S.]

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.

ELISHA FOOTE,
Commissioner of Patents.

108

W. CALHOUN.

Bung.

No. 85,903.—Patented Jan. 19, 1869.

Fig. 1.

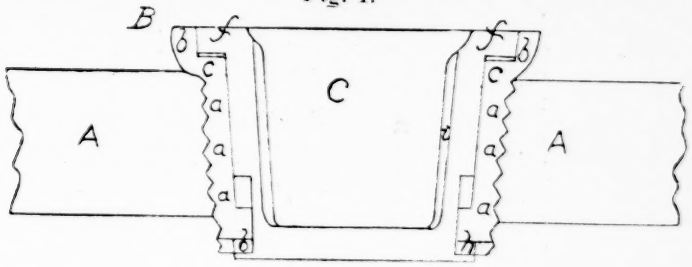


Fig. 2.

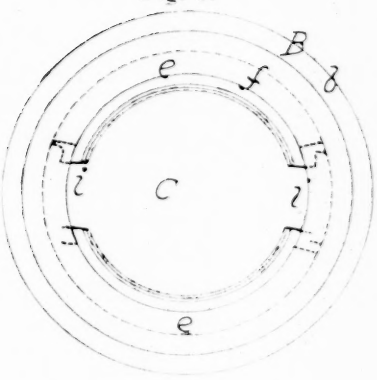


Fig. 3.

Fig. 4.

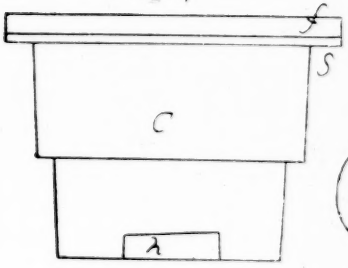
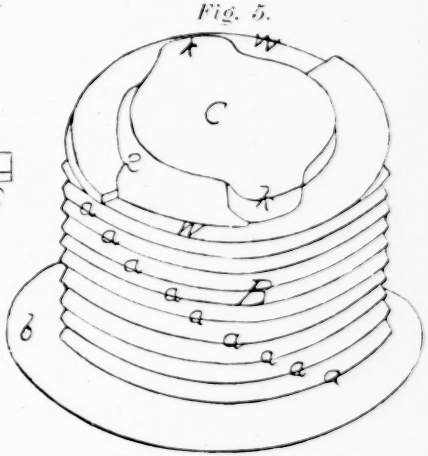


Fig. 5.



WALTER CALHOUN, *Inventor.*

Witnesses: JAS. A. BUCKBA, Jr.
JOHN GIBBONS.

109 UNITED STATES PATENT-OFFICE.

Walter Calhoun, of West Troy, New York. Letters-patent No. 85903, dated January 19, 1869. Improvement in bungs.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern :

Be it known that I, Walter Calhoun, of West Troy, county of Albany, State of New York, have invented a new and improved mode of constructing bungs for vessels for liquids; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon, in which—

Figure 1 represents a vertical cross-section of the invention.

Figure 2 is a vertical view from the top.

Figure 3 is a perspective view of outer portion of bung.

Figure 4 is a perspective view, with part of bung.

Figure 5 is a perspective view of bung inverted.

The nature of my invention consists of constructing a bung in two parts; one I call the bushing, and the other the stopper. The bushing consists of a cylinder slightly tapered, furnished on its outer periphery with a screw-thread, commencing at the bottom and rising up to a flange above. A seat is cut in the top, inside, about one-fourth of an inch deep and three-sixteenths of an inch wide, and an orifice runs through from the said seat to the bottom, so that the bushing is but a shell. Two lips, one on each side, run nearly around, leaving a space of about three-fourths of an inch between the two ends of both lips. This space is to receive a wrench to screw the said bushing in the hole made in the stave of the vessel. The bottom edges of this bushing are made with two inclines or wedge-shaped surfaces, each commencing at the wrench-space's further side, and running to the said space's near side; and, when the screw thread on the outside is that of a right-hand screw, the said wedge surfaces run to the right in thickness, and when the screw is left handed they run to the left.

The stopper is made a shell, and closed at the bottom, and is furnished with a flange to fit in the seat made in the top of the bushing, and has rubber or leather packing placed between. At the bottom, on the sides, are placed two lips, wedge-shaped on their upper sides, and when the stopper is placed in the bushing the said lips pass through the spaces between the inside lips of the bushing, below the bottom-surface line of the said bushing, when the said stopper is turned, so that the projecting lips will impinge and work on the wedge-like surfaces of the bushing in which the stopper works, thus causing the stopper to draw its upper flange, with its packing, down upon its seat, rendering the whole perfectly tight.

This manner of constructing a bung differs from those bungs made with a bushing and a stopper that have their locking-arrangement placed on the flanges of the said bushing and the stopper, in so much that when and where the locking-parts are placed on the upper flanges the drawing power is not perfect enough to bind every part of each tight to the other, which we can see in the principle of locking as applied to hose-couplings and to such bungs as have been so constructed. But by placing the locking-lips of the stopper at a good distance from the packed flange, and having the said locking-lips impinge and work

on the wedge-formed surfaces of the lower end of the bushing, and considerably within the line of the flange of the stopper and its seat, the drawing-power exerted, being under the above-mentioned circumstances, will draw the said packed flange of the stopper tightly and evenly down on its seat, the same as if drawn with a bolt run through the centre of both.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawings making a part of this specification, and the letters of reference marked thereon, the same letters indicating like parts.

A, Fig. 1, represents the stave of any ordinary barrel, cask, &c., furnished with the usual bung-hole.

B is a bushing made of cast-metal, and furnished with either a right or left hand screw-thread, *a a*, and a flange, *b*.

Cut vertically in the top of the said flange *b* is a seat, *c'*.

An opening runs though the whole length of the said metal-bushing B, and is partially filled by the two projecting inside lips, *e e*, Fig. 1, and shown by dotted lines in Fig. 2.

The surfaces of the bottom or lower edges are made wedge-shaped, as W, Fig's 3 and 5, and shown by dotted lines in Fig. 1, and with an outside left-hand screw. The thickness of the said wedge runs toward the left, and, with a right-hand screw, it runs toward the right, or, in other words, the line of inclination of the screw-thread *a* runs in a contrary direction to those of the surfaces W.

C, Fig. 4, represents the stopper, made in a shell, and closed at the bottom, and furnished with a flange, *f*, at the top, and provided with a rubber or leather packing, *g*, on its under side.

The said stopper C is also furnished with the lips *h h*, Fig's 1, 4, and 5. The upper surface lines of the said lips are made to correspond with the bottom-edge surface W of the bushing B, and their thickness runs in opposite direction to those of W on the metal-bushing B.

The inside surfaces of the stopper C are furnished with shallow recesses, *i i*, running vertically down from the top to the inside of the bottom. The said recesses are to receive a wrench, or any suitable instrument, to secure the one to the other.

The mode of operating this bung is as follows:

The bushing B, Fig. 3, is first screwed into the stave A, Fig. 1, by means of a suitable wrench entering the spaces formed by the ends of the inner lips *e e*, Fig. 2. The stopper C is then set into the bushing B, so as to permit the lips *h h* of the said stopper passing through the spaces formed by the inner lips of the bushing B, the flange *f* of the stopper C in the meanwhile dropping into the seat *c* of the metal bushing B, and when thus set in the stopper is turned by a wrench inserted in the recesses *i i*. When the lips are moved over the wedge-shaped surface W, on the lower edge of the bushing B, the said lips *h* bind and draw the flange *f* of the stopper C close down, with its rubber packing, on the seat *c* of the flange *b*.

The object of making the wedge-shaped surfaces W of the lower edge of the bushing B run in its thickening way, the same as that of the screw outside, is that when the stopper is to be tightened up the operation of tightening will tend also to screw the metal-bushing B tighter in the barrel.

Having described my invention,

What I claim, and desire to secure by letters-patent, is—

The bung, consisting of the bushing B and the stopper C, constructed as herein described, for the purposes set forth.

WALTER CALHOUN.

Witnesses:
JA'S A. BUCKBEE, JR.
JOHN GIBBONS.

111 OCTOBER 10, 1874.—This day came Francis Bloodgood, esq., the master to whom reference was made, and filed his report, together with the testimony and proceedings before him on said reference; and said testimony is as follows:

Master's report & testimony.

In the circuit court of the United States for the eastern district Wisconsin. In equity.

GEORGE B. CORNELL }
vs.
EILERT SCHUMACHER. }

Proceedings before Francis Bloodgood, master in chancery, under order of reference embodied in interlocutory decree herein, at the master's office, Milwaukee, May 18, 1874.

Present, Mess'rs Bond & Cary, of counsel for the complainant; M'r A. Finch, of counsel for the defendants.

EILERT SCHUMACHER, called by complainant, being duly sworn, says: I am one of the defendants in this suit.

Q. When did you commence the manufacture of these wrenches and bushes?

(So much of the question as relates to the bushes is objected to by the def't's counsel as irrelevant. The master decides that he will take the testimony subject to objection.)

A. I think it was in 1872.

112 Q. What time in 1872?

A. The beginning of the year.

Q. Under what circumstances did you or your firm commence the manufacture?

A. I do not know that I am posted. M'r Johnson attended more to factory matters than I did. We were told by several brewers that the bushes were not good on account of the slot V.

Q. Did you commence under a contract with any one; and, if so, with whom?

A. For what?

Q. For the manufacture of bushes and wrenches?

(Objected to so far as relates to the bushes as irrel'vant, and ans. taken subject to objection.)

A. With Geo. B. Cornell.

Q. How many wrenches and how many bushes did you manufacture for him under your contract?

(Same objection, and testimony taken as before.)

A. I do not know. I do not keep the books. The contract was 100,000, but they were not all taken—100,000 bushes; that was the con-

tract, if I remember right; about 90,0000, a little over, if I remember right, was taken.

Q. When did you cease manufacturing either bushes or wrenches under the contract.

(Same objection, and testimony taken under it as before.)

A. We stopped making them because we had 5 to 6,000 on
113 hand, which he refused to take until we had an order for them.

Q. When was that?

A. In 1872, I should think; but I am not positive about it.

Q. After you stopped manufacturing under the contract, how long did you continue to make them on your own account?

(Same objection, and testimony taken as before.)

A. When he refused to take them we stopped at once, I think, making on his own account. We are making them yet on our own account—not this bush—we make another bush. We stopped making the bush that we had the contract with Cornell for, and have not made it since.

Q. Wherein does the bush which you now make differ from the one you made for Cornell?

(Objected to, and testimony rec'd as before.)

A. It had no slot, but a projection on the bottom.

Q. How many wrenches have you made for inserting these bushes since you ceased manufacturing under the contract?

(Objected to, and testimony taken as before.)

A. I couldn't tell you.

Q. Can you tell how many you have made altogether, within or without the contract?

(All testimony relating to those made under the contract objected to. Question withdrawn.)

114 Q. Can you tell how many wrenches your firm have made?

A. I can't tell.

Q. Will the books of your firm show the number?

A. They will—they ought to.

Q. Please look at the paper now shown you, and say whether or not that is the contract of your firm with Geo. B. Cornell that you have referred to.

(Objected to as irrelevant and because counsel have stated nothing under the contract. Taken subject to objection.)

A. It is.

(The paper referred to in the last interrogatory is now offered in evidence by the compl't's counsel, and is marked by the master "Exhibit A." The introduction of this paper is objected to as irrelevant. Received subject to objection.)

Q. Have you at any time been engaged in soliciting orders for wrenches and bushes?

(That part relating to bushes objected to as irrelevant, and testimony is taken subject to objection.)

A. Yes, sir.

Q. How many orders for wrenches have you taken?

A. I can't tell.

Q. At what points or places, and to what parties, have you sold them or taken orders for them?

A. Milwaukee, Grand Rapids, some, Springfield, Ill's, Iowa,
115 some, few in S't Paul, Minn., I think, and La Crosse, I believe. I think that is about all. At Milwaukee, of Best, Schlitz, Blatz, Miller; at Grand Rapids, Kuster; at Springfield, Ackerman & Nolte;

at Dubuque, Hep. I can't give the name of the man at S't Paul. At La Crosse, Michael, I think.

Q. Did you ever sell any in Chicago, or to be delivered in Chicago?

A. Yes, to A. Magnus, and some of them were returned. I couldn't say that all were,

Q. Did you sell any at Watertown in this State?

A. I did not personally. I could not say whether the firm did or not.

Q. Can you tell how many wrenches and how many bushes you have sold to the parties named by you? and if so, please state the number.

(Objected to so far as the bushes are concerned as irrelevant, and testimony taken subject to objection.)

A. I can't state the number.

Q. What was the cost of the wrenches manufactured by you, and at what price did you sell them?

A. I can't state the cost; don't know. We sold some of them for $2.50 apiece, and some we gave in with the bushes; did not get anything for them.

116 Q. What would you estimate them to cost?

A. That I couldn't say; I don't attend much to manufacturing; don't take care of the men's time.

Q. Who does have charge of the manufacturing at your establishment?

A. M'r Johnson, my partner.

Cross-examination:

Q. Did you complete the contract for 100,000 bushes, and did you thereupon notify the complainant of that fact?

A. No, sir; we did not complete the contract.

Q. Why not?

A. In the first place, we had, if I remember right, about 7,000 laying there about 5 to 6 months, awaiting for the money from the complainant to pay for them, and we told him we couldn't lay out of our money so long.

Q. Was it because he first broke the contract that you did not make the 100,000?

A. Yes, sir.

Q. How many did you make?

A. We made a little over 90,000, I think.

Q. How many did he refuse to take?

A. 5 or 6,000.

Q. What did you do with them?

A. Melted them over again.

117 Q. Did I understand you to say in your direct examination that you never made any of the complainant's bushes except those made under the contract?

(Objected to because it assumes that a bush with a notch in the bottom is different from one with a notch in the rim.)

A. No, sir; we did not make any.

Q. Did you ever make a bush with a V-slot in its periphery since those made under the contract?

A. No, sir.

Q. Will the Cornell wrench involved in this suit insert the kind of bush that you make in a barrel?

A. No, sir.

Q. How many kinds of wrenches do you know of that will insert one of those bushes that you make, besides the one with an eccentric shaft and latch?

A. Well, a roller-wrench.

Q. How many of them is there?

A. We have two of our own, and there are others that will.

Q. Are the bushes that you make now inserted with these two roller wrenches that you have?

A. Yes, sir.

118 Redirect:

Q. Was not the reason why M'r Cornell did not take the 5 or 6,000 bushes you have mentioned, because you were filling his orders with this other bush, and refusing to account to him for them?

(Objected to as irrelevant, and answ'r taken subject to objection.)

A. No, sir.

Q. Did you not commence manufacturing wrenches and bushes on your own acc't and selling them, before you had delivered the 90,000 to M'r Cornell?

(Objected to as before, and ans. taken subject to objection.)

A. No.

Q. When did you deliver the last bushes that were delivered on the Cornell contract?

A. I do not know.

Q. When did you commence manufacturing on your own account?

A. I couldn't tell exactly; but it must have been several months after we had finished for Cornell all that he wanted.

Q. Will your books show when you made the last delivery to Cornell and when you sold the first lot on your own account?

119 (This and the last question objected to as irrelevant, and answers taken subject to objection.)

A. I think they will.

Q. When did you first see Cornell's patent or patents?

(Objected to as irrelevant, and taken subject to objection.)

A. I don't remember exactly; it was after the Chicago fire—when was that?

Q. In 1871. Who got up the latch-wrench?

A. Johnson is the patentee—my partner.

Q. Was not that wrench and the bush to go with it got up for the express purpose of getting by Cornell and his patents?

(Objected to as irrelevant, and taken subject to objection.)

A. I suppose M'r Johnson is more able to answer that than I am; he is getting up a good many things all the time.

Q. Do you know or don't you know?

(Same objection; and 2ndly, that it is secondary testimony. Taken subject to objection.)

A. We were instructed by the brewers—by Capt. Pabst himself, at least he told me—that we should get up another bush and wrench as the Cornell bush and wrench was not a good one; and I told the capt. that we wouldn't do it because we had a contract with Cornell; that we were going to fill his order. Says I: "Capt., when we take an

120 order we want to fill it, and we don't want to go back on any one; after this order is filled we will talk to you about it."

Q. Do you not know that since you ceased to manufacture under the Cornell contract that Capt. Pabst has taken some ten thousand of the Cornell bushes?

(Objected to as irrelevant, and rec'd subject to objection.)

A. I don't know it.

Q. Did you not say yourself, in A. Mignus' office, in Chicago, to M'r

Cornell, that you would fix him for selling those bushes to Capt. Pabst?
(Objected to as irrelevant, and taken subject to objection.)
A. I don't remember of saying anything like that.

EILERT SCHUMACHER.

Examination reduced to writing and read over to and subscribed by the witness this 18th day of May, 1874.

FR. BLOODGOOD.
Master, &c.

Thereupon the complainant called as a witness WILLIAM J. SCHUMACHER, who, being first duly sworn, testified:

My name is W'm J. Schumacher; I live at Port Washington; am son of the defendant Schumacher, and am employed by the def'ts as book-keeper, and have been so employed for three years last April, I think.

121 Q. Have you the books of the firm, or such of them showing the manufacture of wrenches and bushes here before the master?
A. Yes, sir.
Q. Please state how many wrenches have been manufactured and sold by the firm of Schumacher and Johnson, and also the number of bushes manufactured by said firm since the 6th day of August, 1872, other than those delivered to George B. Cornell, the compl't, or on his order, as appears from the books.
(Objected to, so far as the bushes are concerned, as irrelevant, and taken subject to objection.)
A. Wrenches manufactured and sold, seventeen, (17;) bushes manufactured, thirty-nine thousand two hundred and eighty, (39,280.) All these were sold, but (1,500) fifteen hundred were returned.
Q. Have you drawn off from the books of the def'ts' firm a list of the parties to whom the wrenches and bushes were sold, with dates, numbers, &c.; and, if so, will you produce said paper?
(Objected to, so far as relates to the bushes, as irrelevant, and taken subject to objection.)
A. Yes; and I here produce it.

122 Q. Does this paper you now produce in ans'r to last question contain a list of all of the wrenches and bushes manufactured and sold by the def'ts other than those delivered to the complainant or upon his order?
(Objected to as before, and rec'd subject to objection.)
A. Yes, sir.
Q. Does it contain a statement of the wrenches that were given away, and does it show all of the different kind of wrenches made, and the different kinds of bushes made by said firm on their own account?
(Objected to as before, and rec'd subject to objection.)
A. No, sir.
Q. What kinds does it include?
(Objected to as before, and rec'd subject to objection.)
A. The eccentric shaft with latch.
Q. What kind of bushes does it include?
(Objected to as before, and rec'd subject to objection.)
A. The bush with projection on the bottom.
Q. How many eccentric shaft and latch-wrenches were given away by the firm?
Ans. My books do not show how many were given away.
(The complainant' counsel now offers in evidence the statement drawn

by the witness from the books of the def'ts, to which he has testified, and which is marked by the master "Exhibit B." The paper is received in evidence, to be annexed to and returned with the testimony.)

123 Q. Would it not be necessary for each of the parties named in the list Exhibit B to have one or more wrenches, in order to insert the bushes sold to them?

A. It would be necessary to have one, but not more than one.

Q. Some of the parties named in the list are marked as having two wrenches; did not in fact quite a number of the others have more than one, either sold or given to them?

A. Those marked more than one on the statement are not consumers; they are dealers.

Q. When they were consumers did they not have but one?

A. No; but one.

Q. Did the firm in fact furnish, either by sale or gift, each of the parties named on list Exhibit B with a wrench?

A. Yes, sir.

Q. What other kind of wrenches than the eccentric-latch wrench have the def'ts manufactured within the last two years?

(Objected to as immaterial and irrelevant; taken subject to objection.)

A. Two.

Q. Please describe how these two were constructed, and how they operated.

124 A. One a three-roller eccentric wrench, the other is a one-roller eccentric wrench.

(Ques. and ans. objected in due time as irrelevant, and rec'd subject to objection.)

Q. Have you one of the three-roller wrenches present; and, if so, will you make it an exhibit in this case?

(Objected to as irrelevant and incompetent, and rec'd subject to objection.)

A. There is one here, but it don't belong to me nor to the defendants.

Q. How many three-roller, and how many one-roller wrenches have the def'ts made?

(Objected to and allowed as before.)

A. I do not know.

Q. Do your books show the number?

(Objected to and allowed as before.)

A. They do not.

Q. How many, or about how many, have the def'ts made?

(Objected to and allowed, subject*ed* objection as before.)

A. I don't know.

Q. Haven't you any idea?

(Objected to and allowed, subject to ob'ec. as before.)

A. I have no idea.

Q. How many bushes have been sold which are to be inserted by these one and three roller wrenches?

(Objected to and allowed, subject to objec. as before.)

A. I do not know.

Q. Will your books show the number?

125 A. No, sir.

Q. Then do your books show the firm-business?

A. My books will show all the bushes and all the wrenches that we sold, but they will not show what wrenches were given away.

Q. If the books do not show the diff't kinds of bushes sold, how are

you able to pick out those which were to be inserted by the eccentric-latch wrench?

(Objected to and allowed, subject to objection as before.)

A. I rec'd my information from the def't Johnson.

Q. How many bushes, of all kinds, do your books show to have been sold by the defendants, other than those delivered to the complainant or upon his order?

(Objected to and allowed, subject to objec. as before.)

A. I have not footed it up.

Q. Will you please do so and state the number?

(Objected to and allowed, subject to object. as before.)

A. I will.

(Recess taken to examine books, and on assembling wit's continued:)

Fifty-nine thousand six hundred and twenty-two, (59 622.)

Q. At what price or prices do your books show what the wrenches were sold for, when sold at all, of all kinds?

126 (Objected to for the reason that it is in proof that there were wrenches made by the def't not involved in this suit, and that the question should be confined to the wrenches that were involved in this suit. Allowed, subject to objection.)

A. From $2.50 to $5.00.

Q. Were the eccentric-latch wrenches sold at those prices?

A. Yes, sir.

Q. What is the date of the last delivery of bushes on the Cornell order, as shown by your books?

A. April 17, 1873.

Cross-examination:

Q. Does not the 17 (seventeen) wrenches include all that was sold and given away? I mean of the eccentric-shaft-latch wrench.

A. About that.

Q. How many of those were not used and returned?

A. That I couldn't answer.

Q. Were not some of the bushes inserted with the roller wrenches?

A. Yes; I think so.

Q. About how many of the bushes were inserted with the eccentric shaft and latch wrench?

A. I should think not to exceed 10,000.

127 Q. Are there not a large number of bushes still on hand with the parties to whom you sold them, that have not been used in this city and elsewhere?

A. Yes, sir.

Q. How many kinds of bushes have the def'ts made, that you have already testified about?

A. Two.

Q. State the difference between the two.

A. One has a projection on the bottom and the other has not.

Q. Would not the expanding-wrench of the complainant, produced here, insert either of these bushes in a bung?

A. Yes, sir.

Q. Could they be inserted in a bung-hole with the three or one roller wrenches?

A. Yes, sir.

WM J. SCHUMACHER.

Thereupon the complainant called as a witness, WILLIAM JOHNSON,

who, being duly sworn, says: I am one of the def'ts, and live at Port Washington, Wisc.

Q. What part of the business of Schumacher and Johnson is under your charge and superintendance?

A. The mechanical part.

128 Q. What is the cost of manufacturing wrenches; that is, the eccentric-latch wrench?

Q. About one dollar and a half.

Q. What is the cost of manufacturing wrenches like the wrench shown in the complainant's patent?

(Objected to for the reason that it is not shown in evidence that the def'ts have ever made any wrenches of the kind, nor is it claimed by the bill that he ever did. Allowed subject to objection.)

A. About a dollar and quarter to a dollar and a half.

Q. Please look at the wrench now shown you, and say whether or not that is one of your three-roller wrenches; and, if so, will you make it an exhibit in this case?

(Question objected to as irrelevant, and because this wrench is not involved in this suit. Allowed subject to object'n.)

A. It is one that we made, and I will make it an exhibit in this case.

(NOTE.—The complainant here offers it in evidence—the wrench—marked "Exhibit C." Its introduction is objected to by the def'ts' counsel as irrelevant, and it is rec'd subject to objection.)

Q. How many, or about how many wrenches have you made like Exhibit C?

(Objected to as irrelevant, and allowed subject to objec.)

129 A. I should judge from 15 to 20. I could not tell the exact number.

Q. How many, or about how many, one-roller wrenches have you made?

(Same objection, and allowed subject thereto.)

A. About three or four.

Q. How many, or about how many, of the eccentric-latch wrenches have you made?

A. I think between 15 and 20.

Q. If there were 17 sold of these eccentric-latch wrenches, and some given away, must there not have been more made than 15 or 20?

A. Not to my knowledge.

Q. Were all of the several kinds made disposed of either by sale or gift?

(That part of the question objected to except what relates to eccentric-latch wrench, and allowed, subject to objec.)

A. They were not.

Q. How many of them have you disposed of?

(Same objection, and rec'd, subject to objection.)

A. From 35 to 45 in all.

Cross-examination:

Q. Had you patent for the eccentric shaft & latch wrench involved in this suit, and was that patent introduced in evidence on the trial of this cause?

130 A. Yes, sir.

(Compl't's counsel here admits, for the purposes of this reference, that such patent was in evidence.)

Q. Has any of the bushes sold by you not been used; and, if so, why not, and how many?

A. Some of the parties that have the bushes, refused to use them because M'r Cornell has threatened to sue them.

Q. How many, about?

A. Do you mean on acc't of M'r Cornell's threat?

Q. I mean on acc't of his threat, or for any other cause.

A. I should judge about 20 to 30,000.

Q. How many bushes have been used with your eccentric shaft and latch wrench.

A. As near as I can ascertain, between 8 and 10 thousand.

Q. What are the eccentric shaft and latch wrenches worth apiece?

A. We get from two dollars and a half to three dollars for them.

Q. How many of the eccentric latch wrenches were used, and how many returned not used?

A. Well, there was two that I know of that were returned, and I judge that from two to four were returned.

(Recess till 2 o'clock p. m., when the parties appeared as before, and the witness continued.)

131 Redirect:

Q. What proportion of the wrenches manufactured by your firm were sold, and what proportion was given away?

(Objected to for the reason that it don't inquire what wrenches, and allowed, subject to objec.)

A. I couldn't say.

Q. Were as many as half of them given away?

(Same objec'n, and allowed as before.)

A. I really don't know.

Q. For what purpose or object were any of them given away?

(Objected to as irrelevant, and allowed, subject to objection.)

A. Because these large brewers when they buy bush they refuse to pay for a wrench.

Q. How many of your customers are large brewers?

(Objected to, and allowed as before.)

A. I do not know.

Q. Are not nearly all of your customers large brewers?

(Objected to, and rec'd as before.)

A. That I couldn't say.

Q. What, in your opinion, constitutes a man a large brewer?

(Objected to as before, and allowed as before.)

A. When he does a big business.

132 Q. How much business must a man do to a big business?

(Same objection & ruling.)

A. That I couldn't say. I don't know.

Q. How many bushes must a brewer purchase in order to entitle him to a wrench free?

(Objected to because irrelevant and hypothetical, and there is no standard or rule known to the law to regulate matters of this kind. Allowed, subject to objection.)

A. That I couldn't say. We have no rule. Schumacher does the selling, and I don't know what he does. Don't ask him.

Q. M'r Schumacher has testified that there were a number of bushes sold which he knew nothing about. Who knows about these bushes sold without his knowledge?

(Objected to as irrelevant, and taken, subject to objection.)

A. I don't know who does.

Q. You say that from 8 to 10 thousand of the bushes sold and em-

braced in the list "Exhibit B," have been used. What has become of the remaining 30 thousand which were sold, and of which only five hundred are shown to have been returned?

A. They are in the hands of parties that refuse to use them on acc't of M'r Cornell's threats, as near as we can ascertain.

133 Q. How is it, if that is the case, that the same parties give orders for large quantities, month after month, during the time you have been manufacturing on your own a/c, as shown by this Exhibit B?

(Objected to as irrelevant, and allowed, subject to objection.)

A. I don't know. M'r Schumacher attends to that part.

Q. How do you know, then, that have not been used?

(Same objection, and rec'd as before.)

A. Some parties have them on hand, and some refuse to use them.

Q. Please name the parties that have them on hand, and the parties that refuse to use them. Give the names of all that you know.

(Same objection, and allowance as before.)

A. I only know what few there is on hand in the city of Milwaukee. The others I don't know. Best & Co. have some on hand; Blatz has some on hand. There are others, but I don't know them, because I have not been there.

Q. How many have Best and Co. on hand?

(Objected to, and allowed as before.)

A. I should think between 3 & 6 thousand.

Q. How many has Blatz on hand?

(Same objection and allowance.)

A. From 500 to 1,000. I saw them there yesterday. I went in there and looked at them.

134 Q. Do you know whether Jos. Schitz has any on hand or not?

(Same objec. and allowance.)

A. I do not.

Q. Do you know whether he has used up what he purchased.

(Same objec. and allowance.)

A. I do not.

Q. Do you know how many these outside men at La Crosse; Peoria, Ill's; Grand Rapids, Mich.; Springfield, Ill's; Dubuque, I'a; Louisville, K'y, have on hand?

(Same objec. and allowance.)

A. I do not. M'r Schumacher attends to that.

Q. Don't you know, of your own knowledge, that more than 30 thousand of these bushes have been used?

(Same objec. and allow'ce.)

A. I do not.

Q. Do you know that there are as many as 25 thousand that have not been used?

(Same objec. & allow'ce.)

A. No, sir.

Q. Do you know, of your own knowledge, where there are as many as 5 thousand that have not been used?

(Same objec. & allow'ce.)

A. I do.

135 Q. Where are they? Give the names of the parties holding them, and the number held by each.

(Same objec. & allow'ce.)

A. Best, Milwaukee, from 3 to 6 thousand: Blatz, Milwaukee, from 5 hundred to one thousand.

Q. Do you know of any others? And, if so, please name them and state am'ts.

(Same objec. & allow'ce.)

A. Welter, a small brewer at Port Washington. He didn't buy them, but owns the brewery now; 50 to 100; I think as many as 50.

Q. Is that all?

(Same objec. and allow'ce.)

A. All that has come directly under my observation.

Q. How many bushes were sold Best & Co.?

(Same objec. and allow'ce.)

A. That I don't know.

Q. How long have Best & Co. held the three to six thousand which you say they have on hand?

(Same objec. & allow'ce.)

A. That I don't know.

Q. Have they held them for a year?

(Same objec. & allow'ce.)

A. That I couldn't say.

Q. How do you know that they are holding so large a quantity?

(Same objec. & *and* allow'ce.)

136 A. I have it from their cooper and have seen the bushes—the boss or foreman cooper.

Q. When did you see the bushes?

(Same objec. & allow'ce.)

A. I think it was Monday of this week.

Q. Was that the first you knew of their holding any over?

(Same objec. & allow'ce.)

A. I knew that they had some on hand all along, but I did not know how many. They always have some on hand, as a general thing; they are never out.

Q. Does the number of bushes which your books show, which are stated by your book-keeper am't to fifty-nine thousand six hundred and twenty-two, (59,622,) include those manufactured for you by E. A. Harris, of this city, and those manufactured for you at Moline, Ill's.

(Same objec. & allow'ce.)

A. It does.

Q. How many, or about how many, were made by you, and how many, or about how many, were made for you by Harris and at Moline?

(Same objec. & allow'ce.)

A. I don't know; I couldn't say. We bought from Harris and at Moline.

Q. Were those purchased by you from M'r Harris purchased without your giving any order to have them manufactured?

137 (Same objec. & allow'ce.)

A. We ordered him to make them.

WILLIAM JOHNSON.

MAY 19, 1874.

Thereupon the complainant called as a witness GEORGE B. CORNELL, who, being duly sworn, says: I am the complainant; I reside at Chicago, Ill's.

Q. Have you been present at the taking of the testimony of E. & W. J. Schumacher and W'm Johnson before the master?

A. I have.

Q. What would you consider the value of wrenches—core-wrenches—made like, or substantially like, the wrench described and shown in your

re-issue patent No. 5026 to be, if manufactured and sold separate from the bushes?

(Objected to as irrelevant and incompetent, and question allowed subject to objection.)

A. I shouldn't sell one short of one hundred dollars if they did not use the bush.

Q. In what respect *of* for what reasons do you attach this value to them?

(Same objec. & allow'ce.)

A. Because the bushes are of no value without the wrench; they are worthless, for they cannot be inserted unless it is done with the core-wrench—the bushes as now manufactured.

138 Q. How long have you been experimenting with articles of this class, and how long have you been familiar with their use?

(Same objec. and allow'ce.)

A. Either in the spring or winter of 1866 I commenced, and I was nearly four years from that time experimenting before I made an application. I worked along slow; and I have been familiar with them in barrels since 1870. I never sold any until 1870.

Q. From your experience in these matters, what value would you attach to a fork-wrench, or one like Exhibit B B in the testimony taken in this case, for the purpose of inserting bung-bushes?

(Same objec. and allow'ce.)

A. I attach no value to it, because you cannot insert bushes, for they would slip, and it requires more power than B B will stand to insert a bush in its proper place.

Q. What value would you attach to a wrench made like the one called in the testimony in this case the Steifel wrench?

(Same objec. & allow'ce.)

A. It is of no value at all, because the bushes cannot be properly inserted with it.

Q. Have you made any experiments or attempts to use a wrench like the Steifel wrench? And, if so, state what they were, when the

139 experiments were made, and the results.

(Same object. & allow'ce.)

A. I don't know as I understand that ques'n.

(Ques'n repeated.)

I did, in the winter and spring of 1866; and I used it for quite a while in experimenting; tried to put bushes into bung-holes with it. It was not satisfactory. The wrench would slip from the notches before putting the bush-home, and would leave under the flange space.

Q. How or in what manner have you been damaged by the infringement complained of in this case, and to what extent?

A. By the defendants soliciting my customers and receiving orders that were intended for me, and kept them, and filled them themselves; and cutting the price down in order to sell their bushes, and giving wrenches to hold out inducements to parties to take bushes, and by commencing to manufacture and sell their make of bush before they completed contract with me.

(Def'ts object to the ans'r as irrelevant and imcompetent testimony to establish damages. Rec'd, subject to objection.)

Q. At what sum or a'mt do you estimate your damages in this matter?

(Objected to for same reason as stated in last objection, and allowed subject to objec.)

140 A. Not less than fifteen thousand dollars would make me good

to-day for the damage they have done me by the infringement of my rights. I could have sold 200 thousand bushes more than I have sold had it not been for the def'ts infringement upon my patents—patent*ees* or patent.

Q. How long before they ceased delivering bushes to you under your contract did it come to your knowledge that the def'ts were manufacturing on their own acc't.

(Objected to and allowed as before.)

A. As near as I can recollect from 3 to 4 months.

Q. Do you know anything about any bushes supposed to have been made for you under the contracts, which were not taken by you? If so, please state what you know about them.

(Objected to as irrelevant allowed, subject to object.)

A. No, sir; I do not. I will explain that matter. The last shipment, I think, was the last big shipment. I do not know whether it was 10 or 15 thousand. They shipped to me without my order. Before they shipped them M'r Schumacher came to Chicago and drew on me, stating that the contract was completed, and what he drew on me overpaid him for the am't of bushes he had already made. I paid him. Then
141 I came up to Milwaukee to the def'ts' factory. Young Schumacher, the book-keeper, and I went over the books. We found between 6 & 7 thousand short, for which I had already paid them. The am't I overpaid was $50 or $70. I have at home the figures that young Schumacher made. They were already cutting their own manufacture at that time. They did not have 10,000 on hand, nor nothing of the kind; and they made afterwards, as far as I know, only some 300 thicker ones to fit enlarged bung-holes up to the time I came up here. These 300 were made at my request at that time. They had not then filled their con*con*tract with me, and they never did afterwards, to my knowledge. They said then that they would make no more under the contract unless I paid in advance for them. I said to the def't Schumacher, "You go on and fill that contract just as it reads and I will live up to the contract to the letter, and I want you to do the same." They have never notified me since I was at Milwaukee at this time that they had made, or were holding any more bushes under this contract.

Q. What is the object or purpose of giving away wrenches, when they are given away?

(Objected to as irrelevant, and allowed subject to objec'n.)

142 A. For the benefit of the bush. In selling the bush I have seen a great many orders that the purchaser would buy the bushes if I would give them a wrench.

Cross-exam'n:

Q. What time in the year was it that you made this contract?

A. In Jan'y, 1872, it was written out. In Feb'y it took effect.

Q. Did they begin to deliver you bushes in Feb'y?

A. I think they did.

Q. Did they deliver them as fast as you want' them?

A. Sometimes they did and sometimes not.

Q. Did they as fast as the contract required?

A. Close to it, I think.

Q. Did you complain at their not make them fast enough?

A. Yes, sir; but I don't know as it was their fault.

Q. When was it?

A. I can't state the month. They were broken down at the time.

Q. Did you ever apply to them for bushes under that contract and was refused?

A. Yes.

Q. When was it?

A. I think about the time that I was here, as I have before stated. I then requested them to fill the contract, and Schumacher said he

143 would not do it unless I paid them in advance. I asked him had I not always paid him for every bush I got, like a man. We had some little sharp words. He said I had. I said to him, "I suppose you think I won't *to* take them because you are making other bushes and wrenches before you get my contract done?" I said to Johnson, who was there at the time, "What right have you to solder on to my molds and experiment on them?" I asked Johnson if he that it was right for him to go around soliciting my customers and telling them to hold and he would furnish them a better bush and wrench before he had finished my contract?

Q. Where did this conversation occur?

A. In the office of the def'ts in Milwaukee.

Q. Who was present?

A. M'r Johnson and the two Schumachers were present, and, I think, M'r Smith. I can't give the date of this occurrence.

Q. Was it in July, 1872?

A. It was later.

Q. Was it in Aug., 1872?

A. I think it was in the fall of 1872. I can't give the month now.

Q. Was it in Dec.?

A. I can't say at present.

144 Q. According to your best judgment, was it as late in the fall as Nov.?

A. It was not a great way from Nov. either way, I think.

Q. Did you ever get any bushes on that contract after this time that you speak of?

A. I think I did, to the am't of the balance I had overpaid them for. The last they sent by express with the bill, giving me credit for the balance of the money due me, and sent them "C. O. D."

Q. How much had you overpaid them at that interview, about Nov., the time of this conversation?

A. I don't know as that was the time we figured up.

Q. Haven't you already stated that at this interview you have been talking about you called to mind that you had overpaid them?

A. I think not.

Q. You have said that at some time you had had an interview with the def'ts and informed them you had overpaid them $70.00, have you not?

A. I have.

Q. When was that interview?

A. I can't tell. I look at memoranda I have at home, showing the date and figuring we made at this time.

Q. You have said that they sent bushes enough to balance that overpay't by express, "Collect on delivery," have you not?

145 (Objected to because it puts words as the statement of the wit's which are not of record.)

A. Yes, sir.

Q. Did you ever receive any bushes after receiving those for the overpayment; and, if so, when, and how many?

A. Never to my knowledge.

Q. State as near as you can the interview, the last interview preceding the sending of the bushes by express.

A. I can't do it.

Q. You have stated another interview, not far from Nov. either way. Were the bushes sent before or after that interview?

A. I can't tell that.

Q. Did you ever have an interview with the def'ts, in their office, after the one which you fix about the month of Nov.?

A. I can't say, sir.

Q. At that interview, about Nov., did any conversation pass between you and the def'ts in their office regarding the contract?

A. I can't say: only at the time that I have stated before; that is all that I recollect of now.

Q. Did you ever have an interview with the def'ts, in their office, about the contract after this interview, which you say was about the month of Nov., 1872?

146 A. I can't say nothing further than what I have stated before in regard to the contract.

Q. Do you mean to be understood by your last answer as saying that you don't know whether you had or not?

A. I don't recollect.

Q. In that interview, or some other with the def'ts, about the month of Nov., (when young Schumacher was present with def'ts,) did not they, or one of them, inform you that all the bushes under the contract were completed, and aske you to take them, and you replied that you would only take them as you could sell and dispose of them?

A. No, sir; they did not to my knowledge. I have no recollection of their saying anything of the kind to me.

Q. Did you, after that interview, about the month of Nov., ever apply to the def'ts, or either of them, for the balance of the bushes due on the contract?

A. Nothing further than what I have stated in the above.

Q. What do you refer to in that stated as above?

A. That I asked them to fill that contract just as the contract read.

Q. What did they reply?

A. I have answered that. That they wouldn't unless I paid for them in advance.

Q. What were the terms of the contract for payment?

147 (Objected to because the contract is the best testimony. Compl't says he don't ask to prove the contract, but to test witness' knowledge and recollection of it. Objec. overruled.)

A. I was to pay for them on or before I got them, after making the one hundred thousand. If there was any left that I refused to take, they had the privilege of selling them and deducting five cents for each and every bush that they sold, and were to sell them at my prices, and remit to me the balance of each and every sale, if I mistake not the terms of the contract. After giving me six months' notice, they had the privilege of thus selling.

Q. Did I understand you, on your direct exam'n, to state in terms, or insinuate, that the def'ts had broken that contract about the bushes?

A. I don't know whether you so understood it or not.

Q. Did you so state in terms or insinuate in your direct exam'n that they had broken their contract as to the bushes?

A. I do not recollect how I have testified, but, as I understand the contract, they have broken it.

Q. Wherein have they broken the contract?

A. By not filling it and notifying me, and not selling as the contract reads, but sold their own manufacture instead.

148 Q. Do you understand that the way matters stood under the contract that the def'ts were bound to sell the bushes remaining on hand?

A. I do.

Q. Had they any right to sell them until you had neglected to pay for them and take them away?

A. If I had paid for them and taken them away how could they sell them?

Q. (Repeated.) I mean until you had refused to pay for them?

A. No, sir; they had not.

Q. The bushes were to be delivered to you at their manufactory in Milwaukee, were they not, at the rate of 2,500 a week, from and after the contract was made, by the terms of the contract?

A. That is the way I understand it.

Q. Did you ever demand, at the manufactory, any of these bushes, and offer to pay for them, and were refused?

A. I demanded the bushes of them—the balance of the contract; the def'ts refused to make them unless I paid for them in advance.

Q. Do you swear positively to that last answer you have made?

A. I do.

149 Q. Haven't you already stated that the terms of the contract were that you were to pay for them in advance, at the time you took them, or before?

A. That is the way I understand the contract.

Adjourned until 9 a. m., May 20, 1874, when the parties appeared as before, and the witness continued.

Q. Have you not abandoned the use of the V-slotted bush and wrench to insert it?

(Objected to for the reason that it is immaterial whether the complainant use his patent or not. Allowed, subject to objection.)

A. I have not; I use both; the brewers do.

Q. When did you last sell any of the V-projection wrench and V-slot bush?

A. The bushes I sold 500 yesterday with the V-slot in it, as you call it. I think it is about two months ago that I sold three of the wrenches.

Q. Which do you regard as the most valuable, your V-projection wrench or the expanding wrench?

A. I think one is of just as much value as the other, because you can produce the same result with either, and just as quick, so I consider, if there is an improvement in the expanding wrench, it is for time and use to determine. It is left with the brewers.

Q. Did you regard them of equal value when you received your last patent?

150 A. Yes, sir.

Q. What was your object, if this was so, in securing the last patent?

(Objected to as immaterial, and allowed subject to objection.)

A. It was to show that the core could be operated without any projection, and without the core it could not be operated. To show that anything put upon the core to keep it from turning would produce the same result as the V-projection.

Q. Then you secured the patent for a test, and not for its practical utility?

A. For its utility, as you call it, because it was just as convenient as

the other. I knew it would produce the same result, and less expense to manufacture them.

Q. Has not the V-projection the tendency, when *gua*ged with the V-slot in the bush, to burst and destroy the bush?

A. It has not. It does not with these mal'able bushes, for one has never broken to my knowledge in a beer-barrel since I commenced their manufacture. They have been tested very thoroughly.

Q. You have stated that the Steifel wrench is valueless, or comparatively so; will you now state whether yours differs in the principle of construction from that of the Steifel wrench?

151 A. The Steifel wrench has no core, and it is inoperative without a core, and you can't use it practical' at all. It is of no account, and so all the brewers say that I have talked with. As mine has a core, it prevents it from turning oblique while turning the bush into place and filling the bung-hole, when you can readily turn it down to its proper place.

Q. Do you not know, or have you not been informed, that Capt. Pabst, of Best's brewery, abandoned the use, at one time, of your wrench because they split the bushes, and obtained a Steifel wrench and bushes for use?

A. I have seen bushes represented to have been made by Col. Steifel at Capt. Pabst's cooper-shop, but not acc't of my wrench being insufficient to put my bushes in, and since that time I have sold to Capt. Pabst 10 thousand & 600 *hundred* of my bushes with a V slot in, and put in with my patent wrench.

Q. (Question repeated.)

A. No, sir.

Q. Do you mean to swear positively that the damages you have sustained by reason of the def't's infringement of your patent is $15,000.00?

A. I do.

152 Q. Do you know what the profits on 59,620 bushes would be?

A. I could figure it very quick. (Does so and answers: $5,962.00 sold by me after paying the manufacturers.

Q. What are your damages which you claim by reason of the infringement, up to the 9th day of Dec., 1872?

(The limitation of the ques'n objected to for the reason that the order of reference requires the master to state the damages to the date of his report. Objection overruled.)

A. I cannot tell, for the simple reason that I have no dates of the am't of bushes they sold up to that time, nor what soliciting they had done prior to that date to prevent me from selling.

Q. What profits have you lost by reason of the infringement of your patent by the def'ts up to the 9th day of Dec., 1872?

A. I cannot tell, for the reasons stated in my last answer.

Redirect:

Q. How did it happen that the shipment of brushes to you which were sent "C. O. D." was also a shipment for an am't overpaid by you to the def'ts?

(Objected to as immaterial, and allowed subject to objection.)

153 A. The last shipment to me was these large, thick bushes, an order I had given them for 300, I think it was. They made them, sent them "C. O. D.," and collected the balance for the bushes "C. O. D."

Q. Balance of what?

(Same objec'n & allow'ce.)

A. The balance due me on the overpayment was deducted from the price of these 300, and the balance due them collected "C. O. D."

Q. Were you ever notified by the def'ts that they had made any bushes which they were holding for payment or subject to your order?

(Same objec'n and allow'ce.)

A. I was not.

Q. Since the adjournment last night have you made any effort to ascertain the number of the def'ts' bushes which have a projection on the lower edge, that have not been used by Best and Co. and by Blatz? If so, state the number you found at each place.

(Same objec. and allow'ce.)

A. I have. I found from 2,000 to 2,200 at Best's. Capt. Pabst showed me the barrels, and I should there was 2 barrels and a-half of them, which would be from 2,000 to 2,200. M'r Blatz I found this morning at his brewery. They gave me the figures of what they had on hand. I did not see the bushes.

154 (M'r Finch objection to the giving of the figures because hearsay testimony.)

Q. How many bushes will one of your wrenches insert, in ordinary use, before it becomes useless?

(Objected to for form, for the reason that compl't's counsel have produced on this exam'n two wrenches belonging to the complainant, and the question din't say to which the inquiry is directed; 2ndly, because of irrelevancy.

Compl'ts' counsel replies that counsel for def't' is certainly mistaken in assuming that complainants have produced a second wrench and state that there is but one wrench of complainants involved in this suit, and he therefore objects to confusing the record by making a distinction between the wrench sued on *between the one sued on* and the one not in the case, and therefore declines to answer his question.

Objection to form overruled and answer allowed subject to 2d objection.)

A. I have put in as high as 10 thousand. I don't think the core would ever wear out if properly used, but the V will wear out, but another can be welded on. A wrench ought to last a life-time, if properly taken care of.

155 Q. If you attach the value of the selling of the bushes to the wrench patent, to what do you attribute the value of the bushes themselves?

(Objected to as hypothetical and irrelevant; allowed subject to objec.)

A. I do not understand that exactly.

Q. If the selling of the bushes is attributable to the wrench, what value, if any, is there left for the bushes?

(Same objec. and allow'ce.)

A. I do not know what way to answer that, sir.

Q. Do you consider that the bush has any value aside from the wrench, and if so, what is it?

(Objected to as irrelevant, and allowed subject to objec'n.)

A. I consider it of no value at all without the wrench.

Q. Is it not good for anything after it is in the barrel?

(Same objec. & allow'ce.)

A. Yes, sir; it is of value.

Q. How or in what respect?

(Same object. & allow'ce.)

A. In saving the bung-stave, and from leakage. After inserting one of the bushes in a barrel, properly put in, it is worth from 75c. to a dol-

lar a year, with large brewers, where the barrels are used extensively, for each barrel, as I have consulted brewers and coopers. They would
156 have to put in from one to three bung-staves a year when they had no bush. My information is from seeing them put in, and enquiring from brewers and coopers.

Q. How many orders for bushes or wrenches have you lost, if any, by reason of the course pursued by these defendants?

(Objected to because not limited to the time of bringing this suit; 2d, irrelevant; allowed subject to objection.)

A. More than a hundred.

Q. What is the average, or about the average number of bushes ordered at a time, as the orders run?

(Objected to as irrelevant; allowed subj. thereto.)

A. The orders will vary from one hundred to fifteen thousand. It is hard for me to estimate the average. I have never figured the average up.

Q. How many bushes do you estimate that you have lost the sale of by reason of the loss of the orders just stated by you?

(Same objec. and allow'ce.)

A. From 200 thousand to 250 thousand.

Q. Could you have supplied the market, if there had been no competing wrenches put in by the defendants?

(Same objec. and allow'ce.)

A. I could.

157 Q. How much power, or about how much, is required to operate one of your bush-wrenches in inserting the bush properly into the stave of the cask or keg?

A. The power of a stout healthy man applied at the end of the lever. The power thus applied would be equal to lifting about a ton.

Recross-examination:

Q. Do you make it a business to insert bushes with your wrench in person or as superintendant?

A. I put them in myself when I am sampling them.

Q. How many bushes have you inserted with your wrench?

A. I cannot say how many I have seen put in, and have put in a great many.

Q. How many?

A. I have answered that, sir.

Q. You mean, then, that you don't know how many?

A. I can't say how many; several thousand.

Q. How many have you seen put in with one wrench?

A. Well, now, for seeing; I can't tell exactly. If you will allow me to state, I know of cooper who had but one wrench, and he has put in as high as ten thousand. I did not see him put them all in, but
158 have seen him use the wrench.

Q. Do you know of your own knowledge that the cooper did put in 10,000 with one wrench? You have already said you did not see him do it.

A. I can't say anything that I did not see.

Q. Question repeated.

A. I did not see them go in, not all of them. I see him putting them in. I can't say that the cooper did it all; one of the brewers may have put some in.

Q. Question repeated and a categorical ans. required.

A. I do not, no further than I have stated.

Q. How then came you to swear that one wrench would insert 10 thousand bushes?

A. I put in 500 with another man with me at Bartholomew & Light's Brewery. I put in 4,000 at Donner & Bemis' with another man; 4,000 at Bush and Brand's, I think, with another man. Then it wore a little upon the side of the V projection, and I had it set up a little; then I let Sypes' cooper have it, and he has put in over 2,000 with it, and still has the wrench, and it can be used for years to come if properly taken care of.

Q. Did you personally see all these bushes inserted that you have sworn to?

159 A. I did not: I was there off and on. There was no other wrench.

Q. If you did not see it done, then you only know from information.

A. I saw the bushes on the kegs and know that they were put in.

Q. Who was the cooper that put in 10,000?

A. I don't know; I did not say that one cooper put that am't in. I only said that he could do it.

Q. Then it is a mere matter of opinion?

A. I don't understand a mere matter of opinion. What are you getting at? I know it to be fact, because I have been with it, and have seen it done, as I have already stated.

Q. You have said that you never saw 10,000 bushes put in with one wrench, and then you say you know that the wrench can do it.

A. Yes; because I have had the wrench that has done it.

Q. Don't you mean rather that you believe that it will do it than that you know that it will do it?

A. My answers that I have already given show what I mean. I have ans'd to the best of my knowledge.

Q. Which particular ans. do you now refer to?

A. In regard to those that I helped put in myself; that is what I judge from.

Q. Can you give any other or better reasons for your knowledge that one of y'r wrenches will insert 10,000 bushes than given in your previous answers?

160 A. No, sir; I don't know that I can. I have explained as plain as I know; to the best of my knowledge.

Q. You stated on your direct exam'n that you had lost orders by reason of the infringement by the def'ts. Will you state orders for what?

A. Orders for bushes.

Q. Name the parties who gave the orders, and the amount of each.

(Objected to as indefinite. Overruled.)

A. M'r Schlitz; I can't name them all. I can name you places, but I can't give you the names where, if it had not been for them, I would have rec'd the orders.

Q. Why, or how, do you know it?

A. M'r Schlitz' book-keeper told me.

(Ans. objected to. Objec. overruled.)

Wit's offers to continue answering, and the counsel withdraws the question.

Q. Do you know of your own knowledge that you lost any orders prior to Dec. 9, 1872?

(Limitation objected to. Overruled.)

A. The dates I can't exactly tell. I do know of orders, or order. I can name one that I knew of. M'r Johnson was with me at the time;

kept the order back from me, and filled it himself; M'r Müller was the party. I was to have the order, and M'r Johnson talked it out
161 of him after I left, so Müller tells me. The order was promised to me, and he heard him.

Q. Is all you know about it derived from Müller?

A. I saw the bushes there, of Schumacher's make, and Müller told me that Schumacher told him he was going to make a better bush, and not to take my bushes.

Q. Is all you know about it derived from Müller?

A. No, sir; I saw the bushes there; how many I can't say.

Q. How would seeing those bushes inform you that you had lost an order?

A. Seeing the bushes; that is evident enough, and Müller told me he had given the order to Johnson.

(All the witness' ans'rs to the three preceding questions objected to because not responsive.)

Q. Have you given all the reasons why you know that you have lost an order?

A. No.

Q. Have you any personal knowledge that you lost an order for bushes by reason of the infringement?

(Question withdrawn.)

Q. You say on your direct exam'n that you have lost the sale of 250,000 bushes by reason of the infringement. Will you now state the names of the parties who would have given you orders, and the number to each?

162 A. I cannot ans'r. I defy any man to give the number and am't to each brewery.

Q. Are you positive that you lost orders to that am't?

A. I am so satisfied.

Q. If def'ts have only manufactured and sold 59,620, how could you have sold in the same time 250,000?

A. One is on acc't of this lawsuit, this contention, and by waiting to see how this thing terminated. They were afraid to buy, even tho' Schumacher said, I am respo'sible for all you buy, and cutting the price down and waiting to see how this came out.

Q. Do you consider that diminishing the price would defeat the sales?

A. Not where they believed that the def'ts were responsible, but it defeats me in selling by their cutting the price down.

Q. Could not the brewers have purchased from the def'ts the difference between what it is proved they did sell and the 250,000 that you claim you lost the sale of?

A. I couldn't sell, on acc't of their cutting the price down, the am't I would have sold had it not been for them.

(Recess till 2¼ p. m., when the witness continued.)

163 Q. Have you ever sold any of your wrenches involved in this suit?

A. I have.

Q. At what price?

A. Three dollars.

Q. Do you manufacture them?

A. I cause them to be manufactured. I do not manufacture them myself.

Q. What is the cost of manufacture?

A. From $1.50 to $2.00.

Q. Have you ever sold any rights under the original or re-issue of the patent?

A. I never have.

Q. Have you ever granted a license to any one to manufacture the wrenches?

A. I never have.

Q. Did the defendants ever make any wrenches for you?

A. Not by my orders. They made two wrenches for Capt. Pabst, Best & Co., without my order. I asked them why they made those wrenches. They said the capt. requested them to make them because they had broken mine. I said to them I didn't want them to make any more; that if Pabst wanted any I could furnish them. I asked them what they got for them; they said they charged $4.00 for them.

Q. Did you not acquiesce in their making those two wrenches?

164 A. I do not know how to ans. that unless in this way. I told them I didn't wish they should make any wrenches unless on orders from me.

Q. Didn't you know that Best & Co. had broken the wrench they had, and were using your bushes, and that it was necessary to have your wrench to put them in?

A. I did not know it at the time. My first knowledge was seeing the wrench in Best & Co.'s cooper-shop.

Q. Do you claim that the making of those two was an infringement, and do you claim anything therefor?

A. I do. I claim that it was an infringement. They had no right to make it without my order.

Q. Do you claim that it was an infringement, and that you are entitled to damages therefor, if you approved and assented to their making them?

A. If I approved of their making them, I shouldn't. I had plenty of wrenches on hand to supply the market without their making them unbeknown to me.

Q. Do you swear now, positively, that you never did assent to or approve of the making of those two wrenches for Best and Co.?

A. I let it slide. I let it go bye.

Q. (Question repeated.)

165 A. I don't know how to ans. the question more than I have. I let it slide. I said no more about it, and I claim no damages on acc't of it.

Q. You have a patent for your bush, have you not?

A. I have.

Q. Are you acquainted with the Stifel bush?

A. I am.

Q. Do you regard the Stifel bush as an infringement of your bush?

A. I do.

Q. Wherein?

A. First, the taper upon the inside, and the taper upon the outer side, and the flange, and the screw applicable to the stave; in fact, the whole bush.

Q. In case the Steifel bush was invented and in use two years, or at any time before you invented your bush and got a patent for it, would you then regard it as infringing upon your patented bush?

A. Such is not the case. If that was the case I would not.

(It is understood that all the testimony used on the hearing is submitted to the consideration of the master now.)

Witness continues: I meant by last ans'r that I would not consider

it an infringement upon my patent if Steifel had invented his bush before I did mine.

166 Re-redirect:

Q. When was the Steifel bush brought out, and under what circumstances? State, if you know.

A. I went to S't Louis, understanding that Col. Steifel had a patent on his bush in the fall of 1869. I commenced experimenting in the winter or spring of 1866, working at it off and on, at times, and M'r Wilcox, I think, said there is a man in S't Louis that claims a patent upon a bush. I found out on inquiry that it was Col. Steifel. I called on him at his brewery. I thought that if he had a patent on a bush anything like mine I wouldn't apply. I said to him, I understand you have a patent, and showed him mine and he showed me his, and I asked him if he had a patent. He said he had. I asked him to show it to me. He said he wouldn't. I said that if he had a patent I would buy territory of him. He said he would not sell my territory, but would manufacture for me at twelve cents apiece. I said I have worked a good while on this bush; you ought to do better by me. He went down town with me and we parted. I returned to Chicago and let it rest for awhile. I found that he had no patent on the bush, and in 1870 I made the application for a patent.

G. B. CORNELL.

167 NOTE.—The complainant here closes with the understanding between counsel that the complainant shall have the right to introduce testimony as to the value of the use of the wrench.

The defendants thereupon called as a witness FREDERICK MILLER, who, being first duly sworn, says:

Q. Do you remember of M'r Cornell being at your place—M'r Cornell and M'r Johnson—when Cornell solicited you to purchase bushes from him?

A. I do.

Q. Will you state what time that was; the year, and about time of year?

A. He has been there several times, I think.

Q. Do you remember what time of the year when they were there together?

A. I believe it was a year ago last winter.

Q. Did Cornell solicit an order from you for bushes? Did you buy any bushes of him; and, if not, why not?

A. So far as I remember, I had rivet-bushes at the time, as many as I wanted, and I said when I had used them up I would give him an order for that new kind.

Q. Did M'r Johnson in any way try to prevent you from buying bushes from Cornell?

A. No.

Q. You are positive of that, are you?

168 A. Yes, I am.

Q. Did not Johnson at that time when Cornell was present try to influence you to purchase bushes from Cornell?

A. Yes, he did.

Cross-exam'n:

Q. Who did you purchase your first screw-bushes from?

(Objected to as irrelevant & allowed subject to objection.)

A. From Johnson and Schumacher.

Q. Did you not tell Cornell that the reason why you did not give him the order was that Schumacher or Johnson told you to hold on awhile and they would give you a better bush?

(Same objec. and allow'ce.)

A. Not at the time that Cornell and Johnson were there. He came out afterwards alone and delivered me his bush.

Q. Who came out?

A. M'r Johnson.

Q. Why did you give the order to Schumacher and Johnson instead of Cornell?

(Objected to and allowed as before.)

A. M'r Johnson came out several times and said that they had sold to M'r Pabst and Schlitz and others, and that they were well satisfied, and so I gave him the order.

169 Q. Did M'r Johnson at any time after he and Cornell were at your place together tell you to hold on a while and they would give you a better bush, or a bush made of better material than Cornell's bush?

A. Not that I know of. M'r Cornell has not been there a long time when I gave the order to M'r Johnson.

Q. When M'r Cornell came there afterwards did he ask you why you gave the order to Schumacher and Johnson?

A. Yes, he did.

Q. What ans'r did you make to M'r Cornell then?

(Objected to as irrelevant and allowed subject to objec.)

A. I told him that I had ordered the bushes from M'r Johnson and that I had got more than I ordered, and that some of the bushes were not to my satisfaction, but that I had them on hand now and had to use them.

Q. Did you tell him at that time why you gave Schumacher & Johnson the order for the bushes, instead of giving it to him?

(Same object. & allow'ce.)

A. I guess I did that; Johnson and was out there several times, and told me they had sold to Pabst and Schlitz and they had given good satisfaction, and Cornell had not been there for some time, so I gave Johnson the order.

170 Q. When Cornell and Johnson were there together did not Cornell leave you his business card with the understanding that you were to send the order to him when you got ready for the new bushes?

(Same objec. and allow'ce.)

A. That may be so, and may be not so. But a man's head is full of business, and when a man comes to the office several times he always gets the orders.

FREDERICK MILLER.

May 20.

Thereupon the defendants recalled WILLIAM J. SCHUMACHER, who testified:

Q. How many wrenches of the eccentric shaft and latch did the def'ts make prior to the 9 of Dec., 1872?

A. One.

Q. How many in all did they make and sell or give away of that kind of wrench?

A. 17.

Q. Are you confident that that was all?

A. Yes, sir.

Q. Do you remember the contract with Cornell for the manufacturing of 100 thousand bushes?

A. I do.

Q. How many were delivered on that contract?

A. About 94 thousand, I think.

171 Q. Did the def'ts manufacture and have ready at their manufactory the whole 100 thousand in accordance with the contract?

A. Yes, sir.

Q. Were you present in your father's office when M'r Cornell and your father and M'r Johnson and M'r Lyman were present after the contract for the bushes was completed?

A. Yes.

Q. Was Cornell then informed that the contract was completed and the balance of the bushes ready for delivery?

A. Yes, sir.

Q. What did Cornell say in reply to that, if anything?

A. My father said to him, "The bushes are ready; shall we ship them?" He said no. My father asked why. He said, "I have not the room. My barn is full of them," or, "I have got a lot in my barn"—that is it. He said he would take them when he would use them.

Q. What became of that balance?

A. I was informed they were melted up.

Q. About what time did that interview take place?

A. If you allow me to look at the books I can tell you. (Looks at the books and says,) About April 17, 1873. It was a short time prior to that.

172 Q. Wasn't it in the fall of 1872 instead of April? Do you understand my question: Was it not in the fall of '73 after the contract was closed?

A. That contract is not closed at the present date.

Q. Did this interview between the parties take place after the 100 thousand bushes had been manufactured under the contract?

A. Yes, sir.

Q. Were they not all manufactured in the fall of 1872?

A. Yes, sir; to the best of my knowledge.

Q. Was not the conversation, then, about which you have testified, in the fall of 1872?

A. As near I can get at it, it was prior to the date I have mentioned.

Q. Then you cannot state definitely the time that it occurred?

A. No.

Q. But you are positive that it was after the bushes were all completed?

A. Yes, sir.

Cross exam'n:

Q. How many of the 17 wrenches made by the def'ts were given away?

A. I cannots tate.

Q. In the Exhibit B there is no wrench charged to P. H. Best and Co., Milwaukee; did they have one or more?

A. I don't know.

173 Q. Could the bushes which the def'ts made with a lip on the lower edge be inserted by any wrench then in use except the eccentric latch-wrench?

A. I am not mechanic enough to know that.

Q. The first sale to Best & Co. is marked Nov'b'r 8th, 1872; did the def'ts make any of the wrenches which have been called expansion-wrenches as early as that date? (Objected to as indefinite.) I refer to Exhibit B, being the statement you have furnished; the sale referred to by me is a sale of bushes.

(Ques. objected to as irrelevant: allowed subject to objection.)

A. My post is in the office, and I don't know what is going on in the other departments.

Q. Don't you know as a matter of fact that they did not make an expansion-wrenche as early as 1872?

(Same objec. & allow'ce.)

A. I do not know.

Q. All the bushes reported by you in the list Exhibit B, from Nov. 8, 1872, to Jan'y 21, 1874, are reported as being bushes with the lip on the under side; what style of wrenches were sold or furnished by the def'ts to insert that class of bushes?

(Same objec. & allow'ce.)

A. The eccentric latch-wrench.

Q. Then, as the list Exhibit B shows some 9,500 of these bushes sold to Best & Co., did they not have one or more wrenches given
174 them, as the list shows none sold?

(Objected to and allowed as before.)

A. That I can't tell; I can't prove it by my books.

Q. There is no wrench charged to Schlitz, as shown by Exhibit B; did he have one or more?

(Same objec. and allow'nce.)

A. My books will not show it.

Q. The list Exhibit B does not show any wrench charged to Miller, nor to V. Blatz, nor Kaigleder & Co., nor to C. Kuster, nor to Heef of Dubuque, nor to Wiechmann, Peoria, nor to Hagermeister; if wrenches had been sold to these parties would the list Exhibit B show it?

(Same objec. and allow'ce.)

A. It ought to.

Q. If the books had shown any sold to them, or either of them, it would have appeared upon this list, Exhibit B, would it not?

(Same objec. and allow'ce.)

A. If it does not it ought to.

Q. Have you not, since this list was prepared, gone over the books with me and marked every wrench that the books showed on this list?

(Same object. and allow'ce.)

A. I have.

Q. There does not show all the wrenches sold that the books show?

(Same objec. & allow'ce.)

175 A. It ought to.

Q. Don't it?

(Same objec. & allow'ce.)

A. It should.

Q. Do you know of any wrenches being sold that are not on this list?

(Same objec. and allow'ce.)

A. I do not.

Q. Then why are you unwilling to say that the list, Exhibit B, shows all the wrenches sold that the books show?

(Objec. to because it assumes that the wit's is unwilling. Ques. allowed.)

A. Because mistakes are liable to all.

Q. Do you think they show more to have been sold than were sold? (Same object and allow'ce.)

A. No, sir.

Q. By what entry in the books do you fix the date of the complainant's conversation with your father when Cornell, Johnson, & Lyman were present?

(Objected to because wit's has not fixed the date. Overruled.)

A. Sales-book, page 345. Entry-date, April 17, 1873. G. B. Cornell d'r to Schumacher & Johnson, 230 large bushes, 5 cents, $11.25; box, 25 cents; $11.75.

Redirect:

176 Were the bushes sent to Cornell by express, C. O. D., April 17, 1873, made under the contract for the 100 thousand bushes?

(Objected to as being a mere matter of opinion. Taken subj. to objec.)

A. No, sir.

Q. Were they made and sent after the contract for the one hundred thousand was completed?

(Objected to because the wit's has already stated that the contract has not been completed to this day. Overruled.)

A. They were.

Q. Was the contract with Cornell to manufacture one hundred thousand bushes completed by the def'ts, or were the one hundred thousand bushes made, ready to be delivered?

A. Yes, sir.

Q. Wouldn't either of the expansion-wrenches of the def't insert the bushes with the projection on the bottom?

A. Yes, sir.

Q. Have you seen the new wrench of the complainant exhibited here on this exam'n by him?

(Objected to for bringing issues into the case that do not belong to it, and for making new ones. Allowed, subject to objection.)

A. I have.

Q. Would not complainant's new wrench insert the bush of the defendants in the barrel?

177 (Same objec. & allow'ce.)

A. Yes.

Recross-examination:

Q. Did you, as book-keeper of the def'ts, or the def'ts or any one in their employ, so far as you know, ever notify the def't, under the contract, that there were bushes ready to be delivered?

A. He was notified personally in our office by M'r Schumacher, my father.

Q. Could not the bushes, which you say were held over, have been sold for as much as five cents apiece?

(Objected to as irrelevant, and allowed, subject to objection.)

A. I do not know.

Q. Do you think that those left were a lot of old culls which would have not have brought five cents apiece?

A. They were not old culls; they were just as good as any cast-iron bush we ever made.

Q. How do you know that the expansion-wrenches will insert the lip-bushes properly?

A. I don't know.

Re redirect:

Q. Do you mean to be understood as answering to the complainant's last question, as saying that you don't know whether the def'ts'
178 expansion-wrenches will insert their bushes properly?
A. I don't mean to be so understood. They will do it.

Re-recross:

Q. How do you know that they will?

A. I have seen M'r Johnson put some in at our works in Port Washington, for Nicholas Welter, brewer there.

Q. How is it that you are so much better a mechanic now than you were when I asked you if the bushes which the def'ts made with a lip on the lower edge could be inserted by any wrench then in use, except the eccentric latch-wrench, to which you answered "I am not mechanic enough to know that."

A. Because it was explained better to me.

Adjourned until May 21, 1874, at 9 a. m., when the parties appeared as before.

WM J. SCHUMACHER.

Thereupon the defendants recalled, as a witness on their behalf, WILLIAM JOHNSON, who testified:

Q. Did you and *and* your co-defendant have a contract with the complainant to make for him 100 thousand of bung-bushes?

A. We did.

179 Q. Did you in accordance with the terms of that contract complete the same on your part?

A. We did.

Q. Is the contract produced on this exam'n by the complainant marked "Exhibit A," and now shewn you, that contract?

A. Yes, sir.

Q. About what time did you complete the contract, or the making of 100 thousand bushes?

A. Some time in October, 1872.

Q. After you had completed the contract on your part, about the month of Nov., was complainant at your office, when there were present the def't, Schumacher, his son, and M'r Lyman?

A. He was.

Q. Were you present also?

A. I was a part of the time. I was sometimes back in the shop, and sometimes in the office.

Was M'r Cornell at that time informed that you had made all the bushes called for by the written contract and had them for delivery?

(Objected to as leading and overruled.)

A. He was.

Q. What did he reply thereto, if anything?

A. He said at one time that he would take them as he sold them, or as he got orders for them. I don't know which term he used—one of those terms.

Q. Did he ever afterwards call for them?

180 A. He did not, that I know of.

Q. Did you, after the completion of the contract, make, at the request of Cornell, bushes of a larger size, which you forwarded to him by express, C. O. D?

A. We did.

Q. Do you remember of being present with Cornell when he solicited

from M'r Miller, who testified here yesterday, when he, Cornell, solicited an order for bushes?

A. I was at two or three different times.

Q. Did you, on either occasion, try to dissuade Miller from taking an order from him; and, if not, what did you say to Miller?

A. I did not. I tried to have Miller to give Cornell an order; that most of all the brewers in Milwaukee were using Cornell's bush, and that he ought to have them. I told him that the rivet-bush that he was using was an inferior bush to Cornell's, on acc't of the trouble of putting it in, and that he had better give Cornell an order, and that I thought he would never use a rivet-bush again; this was all said in the German language.

Q. What became of the bushes, made under the contract, that Cornell did not take?

A. They were melted over, except that a barrel or a half a barrel is on hand yet.

181 Q. How many wrenches have you made and disposed of with the eccentric-shaf and latch involved in this suit?

A. 17.

Q. Is that all?

A. Yes; that is all.

Q. What was the price you sold them for; or what were they worth?

A. We sold them for from two and a half to three dollars.

Q. What did it cost to manufacture them, each?

A. About a dollar and a half.

Q. What was the net profit to you on them?

(Objected to as irrelevant. Allowed subject to objection.)

A. From one dollar to one dollar and a half.

Cross-examination:

Q. How are you able to say that you completed the contract for making 100 thousand bushes, on your part, in Oct., 1872?

A. We had the book-keeper look over the books and ascertained what had been delivered to Cornell, and counted over what were in the factory on hand.

Q. When was this done?

A. Some time in the month of Oct., 1872. Can't say whether it was the fore or last part of Oct.; but it was done shortly before M'r Schumacher went to see Cornell about the bushes.

182 Q. Where did Schumacher see Cornell, or to what place did he go to see him, about the bushes?

A. He went to Chicago to see him.

Q. Was this prior to the time that Cornell was at your office at the time you have mentioned?

A. It was.

Q. How soon after this was it that Cornell was at your office, on the occasion you have mentioned?

A. In between a month and six weeks, as near as I can remember.

Q. At the time Cornell was present at your office, did not he and your book-keeper examine your books and ascertain that you were 6 or 7 thousand bushes short of filling the contract?

A. No; I don't know that they did.

Q. Do you know that they did not examine the books?

A. I do not.

Q. Do you know anything about it?

A. About what?

Q. (Question repeated.)
(Objected to as indefinite. Overruled.)
A. I do not know.
Q. How many bushes did you have on hand, for the purpose of filling this contract, at *at* the time Cornell was there?
A. We had some 3 or 4 hundred over seven thousand. There were some odd numbers that I could not state.
Q. Had not M'r Cornell, at that time, overpaid you for the bushes that you had before then delivered to him?
183 A. That I do not know.
Q. How do you know that any bushes were shipped to Cornell "C. O. D.?"
A. Do you mean of my own knowledge?
Q. (Quest'n repeated.)
A. That I don't know, because that is not my part of the business. I couldn't tell you how ten per cent. of the goods we make were shipped.
Q. Who informed Cornell, at the time he was present in your office, as you have stated, that you had completed the contract referred to?
A. M'r Schumacher, my partner.
Q. What did Schumacher say to Cornell in that behalf? Give his exact language as near as you can.
A. As near as I remember Schumacher said to Cornell that his bushes were ready; if he paid they were ready for to be shipped. Then they got into some conversation, and they were a little warm, and so much was said on both sides that it is impossible for me to relate?
Q. What did they get warm about?
(Objected to as irrelevant, and rec'd subject to objection.)
A. Questions and answers they gave one another.
Q. What were the questions and answers they gave one another?
(Objected to as irrelevant, and rec'd subject to objection.)
A. I can give a few the starting ones. I left when they got
184 a-talking pretty warm. M'r Schumacher told M'r Cornell that his bushes were ready, and he wanted him to pay for them now. Cornell replied that he had overpaid for what he had, and that he wouldn't take the rest till he sold them. Then they got to going, both talking, and I couldn't tell what was said, and left. If you asked me all day I couldn't tell anything more that was said.
Q. Did not Cornell at that time accuse your firm of manufacturing bushes on their own account?
(Objected to as irrelevant: allowed subject to objection.)
A. Not to my knowledge when I was there present.
Q. When were the bushes, which you say were manufactured for Cornell under this contract and not taken by him, melted over?
A. Some of them were melted over in Aug'st, 1873, before we moved to Port Washington, and some in April, 1874, and I think we have some on hand yet.
Q. Did your firm ever make an effort to sell them?
A. Not that I know of. M'r Lyman, our foreman, some time after that, I don't how many months, saw Cornell in Milwaukee, and told Cornell that if he would take those bushes that we had on hand he would make some discount to him.
Q. Do you swear positively that your firm have only made and disposed of 17 of the latch-wrenches?
185 A. Yes, sir.
Q. If your books show that you have disposed of a greater

number than this would you not deem yourself mistaken as to the number that you have made and disposed of?

A. Yes.

Q. Do you not know that this list produced by your book-keeper, Exhibit B, shows that your firm have disposed of more than 17 wrenches?

A. No, sir; I do not.

Q. Have not your firm very recently sold and delivered to M'r Schlitz ——

(Withdrawn.)

Redirect:

Q. Does not Exhibit B contain other wrenches than the shaft and latch-wrench?

A. Yes, sir.

Recross-exam'n:

Q. How do you know that it contains other wrenches than the shaft and latch-wrench?

A. Because we manufactured some of roller-wrenches, and some have been sold and some have been given away.

Q. Point out the wrenches marked on "Exhibit B," which you say are not latch-wrenches.

186 A. That I couldn't do, because I kept no acc't of them. I knew we sent a couple of wrenches to Michigan, and I don't know even the name of the place.

Q. Did not your firm sell one of the latch-wrenches for $5.00?

A. Not to my knowledge.

Redirect:

Q. Did you not sell one roller-wrench at $5.00?

A. We did.

MAY 21.

WILLIAM JOHNSON.

Thereupon the defendants called as witness HENRY W. LYMAN, who, being duly sworn, says:

I reside at Port Washington. Am in the employ of the def'ts, and have been eleven years, with the exception of two years. Have been with them for the past three years (3).

Q. What position have you occupied with the def'ts for the past three years?

A. Foreman and superintend*a*nt.

Q. Do you know of a contract made by the def'ts to furnish 100 thousand bushes to the complainant?

A. I do.

Q. Was that contract completed by the def'ts; in other words, were the 100 thousand bushes made ready to be delivered to Cornell

187 in accordance with the contract?

A. They were all made according to the contract.

Q. About what time was the contract thus completed by the def'ts? state month and year as near as you can.

A. I think it was in Oct. or Nov., 1872.

Q. At about that time did you see Cornell in the office of the def't. and were they, the def'ts, yourself, young Schumacher, and *y'rself*, all present?

A. Yes.

Q. Was M'r Cornell at that time informed that the whole number of bushes made under the contract were ready to be delivered under the terms of the contract?

A. He was so informed.

Q. What did he say in reply thereto, if any thing?

A. I heard him say that he had his barn full, or had no room for them in his barn.

Q. Did he say anything about taking them as he could sell them?

A. I think he said he would take them and pay for them as he sold them.

Q. Did you, after that, see him; and, if so, how long afterwards, and where and when?

A. I saw him a number of times after that. Once at the Plankinton House.

188 How long after that was it that you saw him at the Plankinton House?

A. Some time in the spring or summer of 1873.

Q. Did you have any conversation with him at that time about the bushes; if so, what?

A. I told him that we were going to move to Port Washington; that if he would take the balance of his bushes that I would make a discount to him on them.

Q. A discount from the contract price?

A. Yes, sir.

Q. What did he reply thereto, if anything?

A. He wanted to know what discount I would make. I told him that I would let him have them at four cents a piece. He said he thought he ought to get them less; that he was making mal'able bushes now, and they were much better than cast-iron, and cast bushes did not sell well. I told him that mal'able iron was the bush to sell.

Q. Did Cornell ever apply for the bushes after the interview in the office that you have testified to.

A. Not to my knowledge.

Q. What number of bushes remained in the hands of the def'ts that Cornell refused or neglected to take?

A. Somewhere been 6 & 7 thousand.

Q. Do you know how many of the shaft-latch wrench were made and disposed of by the def'ts? If so, state.

189 A. According to the book-keeper's books, 17.

Q. What were the' worth, each?

A. From $2 to $3.00; about $3 00 a piece.

Q. What was the cost of manufacturing each?

A. About $1.50.

Cross-examination:

Q. Were you present during the whole interview between def'ts and Cornell, at their office, that you have mentioned, and did you hear all that was said between them?

A. I did not hear all that passed between them. I was not present all the time.

Q. Who informed Cornell at that interview that the contract had been completed?

A. M'r Schumacher; and I think I told him myself that it was full.

Q. Did not Cornell and def'ts' book-keeper, at or about the time of this interview, go through def'ts' books and check the same off with the bills they had rendered Cornell to ascertain how many bushes had been

shipped or delivered to Cornell under the contract, and how their a/c stood with him in reference thereto?

A. They did, previous to this.

Q. How long previous?

A. If my memory serves me right, it was the time before the last that he was up there.

190 Q. Do you know how they ascertained the a/c to stand?

A. I do, nearly.

Q. How?

A. Somewhere about 6,000 short of a hundred thousand. I immediately afterwards went into the foundry and took the patterns of bushes, gave them to a man, told him to make as many molds—enough to make up the deficiency which it required to complete the order. After I had set the man to work at it——

(Objected to as irresponsive; objection sustained.)

Q. How did the a/c stand as to payments?

A. That I know nothing of; it is not my part of the business.

Q. When you had the interview with Cornell at the Plankinton House that you have related, and made him the offer that you have stated you did make at that time, had you any authority from the def'ts to make it?

A. I make almost every contract for the firm and have ever since I have been with them, and they have sanctioned it in every instance.

(Complainant moves to strike out the answer as not being responsive to the question; motion overruled.)

Q. Question repeated, and the witness is asked to state if at
191 this time he had any authority from def'ts to make the particular offer referred to.

A. There was no conversation between the company and me about it, but I have that privilege at any time.

Q. Did you not make this offer upon your own responsibility, and without the request or direction of the def'ts to do so?

A. I made this on my own responsibility, knowing that they would sanction it, as they had always done before in other transactions.

Q. In reply to the following question asked you by def'ts' counsel, viz, "Do you know how many of the shaft-latch wrenches were made and disposed of by the defendants? If so, state," you answered, "According to the book-keeper's books 17." Is this the only knowledge you have upon the subject?

A. It is; there is nothing else that I know of to go by at present.

Defendants rest for the present.

HENRY W. LYMAN.

Whereupon the complainant called HENRY WAGONER, who, being duly sworn, says: I live in Milwaukee, and am a cooper by trade, and have been for the past seven years.

Q. Did you ever work for Philip Best & Co.?

A. I have.

192 Q. State how long.

A. Two years.

Q. When?

A. In 1872 to 1874, as cooper.

Q. While in their employ did you insert these patent bushes in beer-kegs?

A. I did. I was the only one that put them in.

(NOTE.—The witness is now shown the wrench of complainant described in his letters patent, and known as the V-projection core-wrench, & asked:)

Q. Did you use a wrench like the one now shown you in inserting these bushes?

A. I did.

Q. How many bushes have you ever inserted with one of these wrenches?

A. Between 15 & 20 thousand with one wrench of this kind.

Q. In your opinion how many bushes would one of these wrenches insert if well taken care of?

A. As many as you can put in. If taken care of, you can put in 100 thousand with it.

Cross-exam'n:

Q. Do you mean when you say that one of these wrenches would insert 100 thousand that it would do it without repairing?

Ans. Yes, sir, if well taken care of.

193 Q. What do you mean by taken care of?

A. Not using any more power on it than it can stand.

Q. Do you mean to be understood as saying that they never get out of repair?

A. Yes, sir; if used in that way.

HENRY WAGNER.

MAY 19.

Adjourned until June 26, 1874, at 10 a. m., when the parties appeared as before and hearing was resumed, when matter of reference was argued and submitted.

EXHIBIT A.—FR. BLOODGOOD, *master in chancery.*

Contract.

This agreement, made and entered into this 20th day of January, A. D. 1872, by and between Schumacher & Johnson, of the city of Milwaukee, county of Milwaukee, and State of Wisconsin, party of the first part, and George B. Cornell, of the city of Chicago, county of Cook, and State of Illinois, party of the second part, witnesseth:

The party of the first part agrees, in consideration of the payment of five cents for each screw bung-hole bush by them manufactured, to be paid them by the said party of the second part as hereinafter provided, to manufacture for the party of the second part, of suitable iron

194 and in a thorough and workman-like manner, equal in every respect to those already made by said party of the first part for the party of the second part, one hundred thousand (100,000) of Cornell's patent cast-iron screw bung-hole bush, and will finish and deliver the same to said party of the second part at the foundry of the party of the first part in said Milwaukee, at the rate of two thousand five hundred (2,500) each and every week from and after the 1st day of February, A. D. 1872, until the entire one hundred thousand (100,000) are finished and delivered or ready for delivery.

And the party of the second part agrees in consideration that the party of the first part will manufacture for him said screw-bushes as above herein agreed, to pay the party of the first part five cents each for each and every of such bushes so manufactured by them at or before the delivery of the same.

It is further mutually agreed by and between the parties hereto that in case the party of the second part shall refuse or neglect to pay for said bushes or any part of the same, the said parties of the first part

may, on the completion of their contract, by giving six months'
195 notice to the party of the second part of such intention, after the expiration of said six months proceed to sell and may sell for cash, at the same prices for which the same are sold by the party of the second part, any part or the whole of said bushes so remaining unpaid for as aforesaid in their hands, to any party and at any place desirable to said party of the first part, and that this agreement shall be a license and protection to the said party in so doing, the patent of the party of the second part notwithstanding to the contrary, and may retain from the money received for said bushes so sold by them a sum equal to five cents each for the bushes so sold, and shall pay the balance of the said money so received by them to the party of the second part from time to time when thereto required by the party of the second part.

In witness whereof the parties hereto have set their hands the day and year first above written.

G. B. CORNELL.
SCHUMACHER & JOHNSON.

[U. S. int. revenue, 5 cents, Jan'y 23d, 1872. G. P. C.]

196 SCHEDULE B.—FR. BLOODGOOD, *master in chancery.*

Page.	Date.	Name.	No. sold.	Wrenches.	
	1872.				
271	Nov. 8	Ph. Best & Co., Milwaukee	100	.....	
271	" 9	Joe Schlitz, "	200	.....	
280	" 27	" " "	50	.....	
282	Dec. 3	" " "	100	.....	
283	" 3	C. & J. Michel, La Crosse, Wis.	100	1	
284	" 4	Joe Schlitz, Mil	200	.....	
288	" 11	F. Miller	1,000	.....	
290	" 16	Joe Schlitz	1,500	.....	
290	" 16	Ph. Best & Co	2,000	.....	
	1873.				
297	Jan. 10	Joe Schlitz	3,750	.....	
299	" 16	Ph. Best & Co	3,500	.....	
299	" 17	F. Miller	2,500	.....	
300	" 17	J. Moritz, P't Washington	50	1	
305	Feb. 4	Ph. Best & Co	400	.....	
338	April 3	Moritz, Waiter	1,500	5	
339	" 4	V. Blatz	5,000	.....	
341	" 8	Kargleder & Co	1,000	.....	
342	" 10	J. Wiegman, Peoria, Ill	100	1	
348	" 26	Moritz, Waiter	.....	1	
353	May 7	Joe Schlitz, return	.....	1	Returned.
358	" 16	C. Kuster, Grand Rapids, Mich	500	.....	
368	June 9	Ackerman & Nolte, Springfield, Ill.	500	1	
370	" 10	A. Magnus, Chicago	200	.....	
370	" 11	J. Bussinger, Watertown	200	1	
370	" 11	Gerlash, Mil	100	1	
381	" 11	A. Magnus, Chicago	.....	1	
			25,250		
197	1873.				
385	July 16	A. Heeb, Dubuque	1,000	.....	
387	" 18	A. Magnus, Chicago	.....	2	
389	" 21	Stein & Doem, Louisville, K'y	1,000	2	Returned Dec. 18, '73.
396	Aug. 6	Gerlash, Mil	100	1	
404	" 23	Joe Schlitz	500	.....	
406	" 30	" "	1,000	.....	
407	Sept. 3	A. Magnus	500	.....	Returned.

SCHEDULE B—Continued.

Page.	Date.		Name.	No. sold.	Wrenches.	
409		9	Joe Schlitz	2,000	.....	
413	Oct	3	" "	2,000	.....	
414	"	4	Ph. Best & Co	2,000	.....	
421	Nov.	18	" " "	1,000	.....	
422	"	19	Joe Schlitz	850	.....	
426	"	29	" "	970	.....	
429	Dec.	4	Nic. Wetter, P't Washington	50	.....	No wrench
	1874.					
435	Jan.	3	E. Willhuman, Peoria, Ill	500	.....	
439	"	17	F. Hagermaister	200	.....	
41	"	21	Louisville Malt House	500	1	
				14,130	.....	
			Carried over	25,250	.....	
				39,380	.....	

UNITED STATES OF AMERICA,
Eastern District of Wisconsin, ss:

I, Francis Bloodgood, master in chancery, do hereby certify that the reason for taking the foregoing depositions is an order of reference embodied in the interlocutory decree made and entered in the cause entitled in the caption thereof, on the 5th day of January, 1874.

198 I further certify that I was attended by the parties or their counsel, at the time and place as stated in the body & caption of said depositions, and by the said witness; and that the said witness, being of sound mind and lawful age, was, before the commencement of the taking of his depositions, by me duly and publicly sworn to testify the truth, the whole truth, and nothing but the truth in the cause aforesaid, and that the deposition as given was reduced to writing by myself, in presence of said witness and from his statements, and that the said deposition when completed was carefully read over to said witness by me and subscribed by him, in my presence and in the presence of such of the parties and counsel in the said cause as were in attendance.

And I further certify that in the caption and body of the said deposition is contained a complete record of all the proceedings before me at the time of the taking of the same, and that I have retained the said deposition in my possession for the purpose of returning the same with my own hand, together with my report on the matter referred, into the circuit court of the U. S. for the east'n dis. of Wisc., the court for which the same was taken.

And I do further certify that I am not of counsel or attorney
199 for either of the parties in the caption of said deposition named; nor in anywise interested in the event of said cause.

In testimony whereof I have hereunto set my hand this 7th day of Oct., A. D. 1874, and of the independence of America the 99th.

FR. BLOODGOOD,
Master, &c.

And the said master's report is as follows:

Master's report.

In the circuit court of the United States for the eastern district of Wisconsin. In equity.

GEORGE B. CORNELL
vs.
EILERT SCHUMACHER AND WILLIAM JOHNSON.

To the honorable Tho's Drummond, circuit judge, & the honorable James H. Howe, district judge:

I, Francis Bloodgood, master in chancery, do respectfully report that, in pursuance of the order of reference, embodied in the interlocutory decree herein, to me made, I have been attended by the parties hereto and their counsel, and have taken such evidence as they have respectively offered upon the subject-matter of the reference, all of which is herewith returned; and that I have also, in determining the matter referred, considered all the testimony taken in this cause before the entry of said decree.

200 And I do further report that I have, upon the evidence thus presented, computed and ascertained all the gains, profits, and advantages accruing to, and realized and received by, the defendants by reason of their infringement of the complainant's letters-patent, and have taken and stated an account thereof. And that the aggregate amount of said gains and profits is the sum of $3,005.10.

And I have, in addition thereto, assessed the damages sustained by the complainant by reason of said infringement at the sum of $748.50. The particulars of which said account of profits and assessment of damages will more fully appear from Schedule A, hereto annexed and made a part hereof.

And I do further report that, in coming to these conclusions, I have been controlled by the following considerations:

The value of the complainant's wrench appears, from the evidence, to have been the profits it enabled him to derive from the sale of bushes, and not the nominal price at which he sold it to vendees purchasing the bushes.

The gains, profits, and advantages of the defendants in making and selling the infringing wrench are not, therefore, under the peculiar circumstances of this case, confined to the difference between the actual cost of the manufacture and the price at which the wrenches were sold by the defendants.

201 The defendants' sole object in such infringement was to secure the profits upon the sale of the bushes which the infringing wrench was to be used in inserting.

These gains, together with the difference between the cost of manufacture of the infringing wrench and its market-price, were the gains, profits, and advantages actually realized and received by the defendants from and in consequence of their aforesaid violation and infringement of the complainant's letters-patent.

Without making and selling these wrenches the defendants would have had no sale for their bushes, and would not have made the profits arising from such sales. Their bushes could not only be inserted by their wrench, and were valueless without it.

The manufacture and sale of the infringing wrench created the market for the defendants' bushes. And the profits of the manufacture and sale of such wrench by the defendants were consequently the difference between the cost of making the wrenches and the bushes and the prices realized on the sale thereof.

The objection that the complainant is said to claim a patent on his bushes cannot affect these conclusions. The bushes sold by the defendants are not identical with those of the complainant, and could not be inserted with his wrench. And whether defendants' bushes are or are not an infringement of the complainant's suggested patent, is a
202 matter foreign to this reference, and can be determined only in an appropriate suit between the parties. But the profits on the manufacture and sale of these bushes by the defendants are material facts to be considered on this reference in determining the amount of defendants' gains directly accruing from the manufacture and sale of their infringement upon the complainant's wrench. And a decree in this case for their amount will be a bar to another recovery thereof in a suit for the infringement of the complainant's suggested bush patent, even should that patent be established and its infringement enjoined.

Excepting the case of the vendees Phillip Best & Co. the complainant furnished no evidence of any adequate effort to supply the market to which the defendants' sales of wrenches and bushes were confined, and consequently failed to show a state of facts, except in that case, entitling him to an assessment of proximate damages arising from the defendants' infringement of his patent, in addition to the defendants' actual gains and profits accruing from such infringement: although all sales of bushes by the defendants appear to have been at smaller profits than those made by the complainant.

As hereinbefore stated, I have concluded from the evidence that the complainant did not exercise his monopoly by establishing a market-price for his patent wrench separate and distinct from the bushes
203 with which it was to be used: but by disposing of it in connection therewith and deriving his profits from such joint sales, as if the two formed parts of one machine.

And I have stated the account and made the assessment, under the rule of damages fixed in the decree and recited in the order of reference, in conformity with this conclusion.

All of which is respectfully submitted.

Milwaukee, Oct. 5, 1874.

FR. BLOODGOOD,
Master, &c.

SCHEDULE A.

Statement of account of the gains and profits realized by the defendants from and in consequence of their infringement of the complainant's letters patent.

Profits of $1.50 each on sales of 16 wrenches, (see Exhibit A).....	$24 00	
Profits of 5 cents each on sales of 59,622 bushes, (see page 18 of testimony and Schedule A)....	2,981 00	
		3,005 10
Assessment of damages complainant has sustained from said infringement in addition to the above.		
Profits which complainant might have made on sales of his bushes to Ph. Best & Co. if they had		

purchased of him instead of defendants, the 14,970 bushes which is shown in defendants' account to have been sold by them to Ph. Best & Co—14,970 bushes, sold at a profit of 10c
204 each $1,497 00
Deduct the profits allowed by complainant on such sale in the statement of account above. 748 50

Amount of damages assessed $748 50
(See pages of testimony 35, 50, & 63 and Schedule A.)

Total amount of profits and damages..... $3,753 60
Milwaukee, Oct. 5, 1874.

FR. BLOODGOOD, *Master, &c.*

OCTOBER 12, 1874.—This day came the defendants, by their solicitors, and filed exceptions to the master's report, as follows:

Exceptions of def'ts to master's report.

Circuit court of the United States, eastern district of Wisconsin. In equity.

GEORGE B. CORNELL, COMPLAINANT,
against
EILERT SCHUMACHER & WILLIAM JOHNSON, defendants.

Exceptions taken by the defendants to the report of Francis Bloodgood, esquire, one of the masters of this court, made in this cause and dated the 5th day of October, 1874:

FIRST EXCEPTION.—For that it appears in and by said report and the Schedule A thereto annexed, that the said master, in taking & stating the said accounts contained in said schedules, has charged the
205 said defendants with "profits of five cents each on sales of 59,622 bushes, amounting to the sum of $2,981.10," whereas it appears by the pleadings and proofs in this cause & by the proofs taken before the said master, that said charge is erroneous, and that no charge therefor should be made against the said defendants.

SECOND EXCEPTION.—For that the said master, in taking and stating the accounts in the schedule marked "A," has debited and charged the said defendants $748.50 for damages sustained by complainant by infringement of his patent for "profits which complainant might have made on sales of his bushes to Ph. Best & Co. if they had purchased of him, instead of defendants, the 14,970 which is shown in defendants' account to have been sold by them to Ph. Best & Co.," whereas it appears, by the pleadings & proof in this cause, and by the proofs taken before the said master, that said charge is erroneous, and that no charge therefor should have been made against said defendants.

In all which respects the said defendants do except to the said master's said report, and humbly appeal therefrom to the judgment of this honorable court.

FINCHES, LYNDE & MILLER,
Sol'rs for Defendants.

A. FINCH,
Of Counsel.

206 OCTOBER 30, 1874.—This day came the complainant, by his solicitors, and filed his exceptions to the master's report, as follows:

Complainant's exceptions to master's report.

United States circuit court, eastern district of Wisconsin. In equity.

GEORGE B. CORNELL
vs.
EILERT SCHUMACHER & WILLIAM JOHNSON.

Exceptions taken by the complainant to the report of Francis Bloodgood, esq., master of this court, made in this cause and dated October 5, 1874:

FIRST EXCEPTION.—For that the said master, in finding and computing damages, did not include all of the bushes made and sold by the defendants, to wit, 59,622 bushes.

SECOND EXCEPTION.—For that the said master did not include in his computation and finding of damages the bushes sold by the defendants those sold to Joseph Schlitz and Frederick Miller.

THIRD EXCEPTION.—For that the said master did not, in his finding and report, include the wrenches made and given away by the defendants.

In all which respects the said complainant doth except to the said master's said report, and humbly appeals to the judgment of this honorable court.

207 WEST & BOND,
Sol'rs. & of Counsel for Compl't.

NOVEMBER 14, 1874.—This day came the defendants, by their solicitors, and filed stipulation as follows:

Stipulation that petition for rehearing & exceptions to master's report be heard at same time.

Circuit court of the United States, eastern district of Wisconsin.

GEORGE B. CORNELL
against
EILERT SCHUMACHER WILLIAM JOHNSON.

Take notice that we have this day filed in the office of the clerk of said court a petition for a rehearing of said cause, a copy of which you are herewith served; and you will also take notice that we shall bring on the application upon said petition to be heard at the opening of said court, to be held in the city of Oshkosh, in said district, on the 14th day of July next, or as soon thereafter as counsel can be heard, at which time you may appear to make resistance to such application.

Yours, &c.,

FINCHES, LYNDE & MILLER,
Solicitors for Petitioners Eilert Schumacher & William Johnson.

To Mess'rs WEST & BOND,
Compl't's Solicitors.

24 JUNE, 1874.

We acknowledge service of copy of the within notice: also copy of petition for rehearing.
26 June, 1874.

WEST & BOND,
Sol's for Compl't.

It is agreed between the solicitors for the parties in the above entitled cause that said petition for rehearing may come on to be heard at same time the report of master comes up for confirmation.
26 June, 1874.

WEST & BOND, *Comp't's Sol'rs.*
FINCHES, LYNDE & MILLER,
Sol. for Def'ts.

And same day (Nov. 14, 1874) came the compl't, by his solicitors, and filed affidavit of Cornell on motion for rehearing, as follows:

Aff't of Cornell on rehearing.

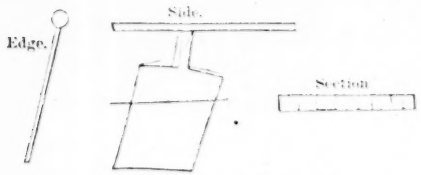
Circuit court of the United States, eastern district of Wisconsin. In equity.

GEORGE B. CORNELL
vs.
ELIET SCHUMACKER ET AL.

EASTERN DISTRICT OF WISCONSIN, *ss:*

George B. Cornell, being first duly sworn, on oath deposeth and says that he has read the petition of the defendant in this cause for a rehearing, and that he knows of the wrench supposed to be referred to in the statement of knowledge, and are in West Troy, New York: that he
209 was present at the taking of the deposition of one Walter Calhoun, of said West Troy, within the last three months, to wit, Oct. 16 or 17, 1873, said deposition to be filed in a certain cause now pending in the circuit court of the United States for the northern district of Illinois, wherein this affiant is plaintiff and one Geo. W. Gillett is defendant, which said suit is brought upon the patent involved in this suit and another patent owned by this affiant; that at the taking of said deposition it appeared that the wrench referred to was made nearly two years later than the invention of the wrench described in the complainant's patent, which said last-named invention was made by this affiant and John Lacey in the winter of or spring of 1866, in all of its essential features, to wit, the central supporting core, the lever, and in the fall of the same year they applied an eying point between the lever and the bush, while the slot in the lever for adjusting the core was not applied until some time in 1869.

Affiant further says that the Calhoun wrench exhibited at that time was and is a substantially different wrench, both in construction and operation, and was made in the form here shown: that is to say, that it was made like an ordinary flat screw-
210 driver, with tapering sides, having an augur or similar handle applied to it. When in use the tapering sides were inserted into vertical slots or gro'ves in the interior of the bushes, which slots caused the use of certain and peculiar bungs,



and materially weakened and damaged the bushes themselves, and that the said Calhoun stated to this affiant that the device was worthless and impracticable, because when sufficient power was applied the wrench would slip out, even when driven in with a hammer, and that when driven in with sufficient force to hold it, it was difficult to get it out.

Affiant further says that of his own knowledge he knows that such a wrench would be impracticable and worthless, as the one there shown would not hold without being driven in; that driving it in tends to make the bush oval; that it does not support the bush like a core, as it is in contact with it only at two points; and that it does not have sufficient power to insert a bush close enough to resist the force of the gasses in the keg or barrel and to prevent leakage around it.

G. B. CORNELL.

Sworn to before me this 14th day of November, 1874.

ALFRED L. CARY,
United States Commissioner for Eastern District of Wisconsin.

211 And same day (Nov. 14, 1874) the defendants filed affidavit of Walter Calhoun, as follows:

Affidavit of Calhoun.

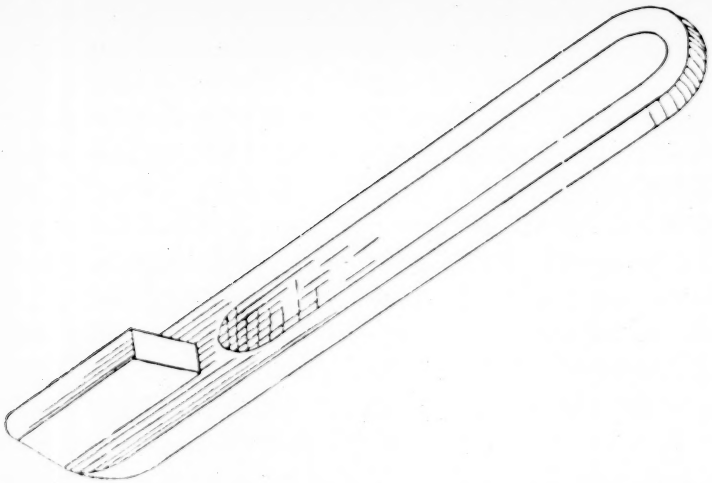
I, Walter Calhoun, of West Troy, in the county of Albany and State of New York, being duly sworn, do depose and say, that I am the inventor of a certain improvement in bungs, described in letters-patent issued to me and numbered 85903, and bearing date the 19th day of January, 1869, and am familiarly acquainted with the bush and bung, and also the wrench used in inserting the bush, a rough draft of the wrench being hereunto attached and marked "Exhibit A." And further say that said wrench was in use in Albany and other places in the State of New York, for inserting bushes patented by me, and that the same were extensively used in and during the year 1869, and were useful, and were generally regarded as efficient in inserting screw-bushes.

WALTER CALHOUN.

Subscribed and sworn to at the city of Troy this 19th day of June, 1874, before me.

JOHN C. GREENE,
U. S. Commissioner Northern Dist. of New York.

212 EXHIBIT A.



213 And now at this same term, to wit, October term, A. D. 1874 and on the twenty eighth day thereof, to wit, on the fourteenth day of November, A. D. 1874, the following proceedings were had, to wit:

Hearing of exceptions to master's r't, &c.

GEORGE B. CORNELL, COMPLAINANT,
vs.
EILERT SCHUMACHER AND WILLIAM JOHNSON, defendants. } In equity.

This day came the parties, by their counsel, and the petition of the defendants for a rehearing, and also the several exceptions of the parties to the master's report, came on to be heard, and were argued by M'r Asahel Finch for the defendants, and by M'r Bond for the complainant, and the hearing being concluded the court took time to consider of the same.

And afterwards, to wit, on the thirtieth day of said October term, A. D. 1874, to wit, on the seventeenth day of November, A. D. 1874, the following proceedings were had, to wit:

Final decree.

GEORGE B. CORNELL, COMPLAINANT,
vs.
EILERT SCHUMACHER & WILLIAM JOHNSON, defendants. } In equity.

214 This day came the parties by their counsel.

And on consideration of the petition of the defendants for a rehearing in this cause, it is ordered by the court that said petition be, and hereby is, denied.

And on consideration of the exceptions to the master's report herein, and the arguments of counsel thereon, it is ordered by the court that all of the exceptions of both parties to said report be, and hereby are, overruled.

And, on motion of the complainant's counsel, it is ordered and decreed by the court, that the said report be confirmed and established; and that the said defendants, Eilert Schumacher and William Johnson, and each of them, and their agents and servants, be perpetually enjoined from making, using, or vending to others to be used, any one or more wrenches, substantially the same in construction and mode of operation as the wrench described in the said letters-patent, re issue number 5026, in the said bill of complaint mentioned.

And the court doth further order, adjudge, and decree that the said defendants, Eilert Schumacher and William Johnson, do forthwith pay unto the said complainant, George B. Cornell, the sum of three
215 thousand seven hundred and fifty-three dollars and sixty cents, being both the amount of profit found by the said master's report to have been received by the said defendants from the manufacture and sale of wrenches, substantially the same in construction and mode of operation as the wrench described in the said letters-patent, in violation of the exclusive rights of the complainant, secured to him by the letters-patent aforesaid, and the amount of damages sustained by the said complainant by reason of such unlawful manufacture and sale of such wrenches by said defendants.

And the court doth further order and decree, that the said defendants do pay to the said complainant the costs of this suit, amounting to the sum of one hundred and ninety-three dollars and forty-two cents; and in default of the payment of the amount of this decree and costs within ten days, that the complainant have execution therefor.

Appeal.

And thereupon the defendants pray an appeal to the Supreme Court of the United States, which is allowed upon said defendants entering into a bond according to law, with sufficient sureties, in the sum of six thousand dollars.

216 NOVEMBER 21, 1874.—This day came the defendants and filed their bond, with Michael Bodden, Asahel Finch, and H. B. Pearson as sureties, in the penalty of six thousand dollars, conditioned that said defendants shall prosecute their appeal to effect and answer all damages and costs if they fail to make their plea good; which bond is approved by the district judge, and is as follows:

Appeal bond.

217 Know all men by these presents that we, Eilert Schumacher and William Johnson, of Port Washington, Ozaukee County, Wisconsin, as principals, and Michael Bodden, Asahel Finch, and H. B. Pearson, of the city of Milwaukee, in the State of Wisconsin, as sureties, are held and firmly bound unto George B. Cornell, of the city of Chicago, in the State of Illinois, in the full and just sum of six thousand dollars, to be paid to the said George B. Cornell, or to his certain attorney, executors, administrators, or assigns; to which payment, well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly and severally, by these presents, sealed with our seals,

and dated this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-four.

Whereas lately, at a term of the circuit court of the United States for the eastern district of Wisconsin, in a suit depending in said court, between the said George B. Cornell, complainant, and the said Eilert Schumacher and William Johnson, defendants, a decree was rendered against the said Eilert Schumacher and William Johnson, and the said Eilert Schumacher & William Johnson having obtained an appeal to reverse the decree in the aforesaid suit, and a citation directed to the said George B. Cornell, citing and admonishing him to be and appear at a Supreme Court of the United States, to be holden at Washington the second Monday of October next:

Now, the condition of the above obligation is such, that if the said Eilert Schumacher and William Johnson shall prosecute their said appeal to effect, and answer all damages and costs if fail to make their plea good, then the above obligation to be void; else to remain in full force and virtue.

EILERT SCHUMACHER. [L. S.]
WILLIAM JOHNSON. [L. S.]
MICHAEL BODDEN. [L. S.]
A. FINCH. [L. S.]
H. B. PEARSON. [L. S.]

Sealed and delivered in the presence of—the erasures in the 23d, 24th, & 27th lines made before execution—
EDWARD KURTZ.
HENRY FISCHER.

Approved by

JAMES H. HOWE.
Dist. Judge.

218 EASTERN DISTRICT OF WISCONSIN:

Michael Bodden, Asahel Finch, and H. B. Pearson, being duly sworn, deposes and says, each for himself, that he is worth the sum of six thousand dollars over and above all his just debts and liabilities and property exempt from sale on execution.

MICHAEL BODDEN.
A. FINCH.
H. B. PEARSON.

Subscribed & sworn to before me this 21st day of November, A. D. 1874.

EDWARD KURTZ, *Clerk.*

Whereupon a citation issued as follows:

Citation.

219 UNITED STATES OF AMERICA,
Eastern District of Wisconsin, ss:

I, Edward Kurtz, clerk of the circuit court of the United States of America, for the eastern district of Wisconsin, do hereby certify that I have compared the writings annexed to this certificate, and they are true copies of their respective originals, and are correct transcripts therefrom now on file and remaining of record in my office, being a full

and complete copy of the record and proceedings in the suit of George B. Cornell vs. Eilert Schumacher and William Johnson, in equity.

In testimony whereof I have hereunto set my hand, and duly affixed the seal of the said court at the city of Milwaukee, in said district, this twenty-sixth day of August, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the said United States the 100th.

[SEAL.] EDWARD KURTZ, *Clerk.*

220 The United States of America to George B. Cornell, greeting: You are hereby cited and admonished to be and appear at a Supreme Court of the United States to be holden at Washington on the second Monday of October next, pursuant to an appeal in the circuit court of the United States for the eastern district of Wisconsin, wherein Eilert Schumacher and William Johnson are appellants, and you are appellee, to show cause, if any there be, why the decree passed against the said Eilert Schumacher and William Johnson should not be reversed, and speedy justice should not be done to the parties in that behalf.

[SEAL.]

Witness the honorable James H. Howe, district judge of the United States for the eastern district of Wisconsin, at the city of Milwaukee, in said district, this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-four, and of our Independence the ninety-ninth.

JAMES H. HOWE,
District Judge.

We accept service of above citation this 28th day of November, A. D. 1874.

WEST & BOND,
Sol'rs for Geo. B. Cornell, Appellee.

(Indorsement on cover:) No. 197. Eilert Schumacher and William Johnson, appellants, vs. George B. Cornell. E. Wisconsin. C. C. U. S. Filed 12th October, 1875.

IN THE

Supreme Court of the United States.

No. 197.—October Term, 1877.

EILERT SCHUMACHER & WILLIAM JOHNSON

vs.

GEORGE B. CORNELL.

APPELLANTS' BRIEF.

WM. P. LYNDE,

Of Counsel.

Joseph L. Pearson, Printer, 9th and D streets, Washington.

IN THE

Supreme Court of the United States.

EILERT SCHUMACHER AND WILLIAM JOHNSON,
Appellants,
vs.
GEORGE B. CORNELL.

APPELLANTS' BRIEF.

This is an appeal from a decree of the Circuit Court for the Eastern District of Wisconsin.

The suit was brought by George B. Cornell for an alleged infringement of certain letters-patent for an "Improvement in Wrenches for Extracting Bung Bushes," such letters-patent being reissue No. 5,026, bearing date Aug. 6th, 1872, issued on the surrender of original patent granted to said Cornell, August 29th, 1871.

The bill of complaint alleges that one Lacey and complainant were the original and first inventors of a certain new and useful combined bush-wrench and bung, and that they made application for letters-patent therefor; that the said Lacey having assigned his interest in said invention to complainant, letters-patent were issued to him Aug. 29th, 1871. The surrender of the original letters-patent and the reissue August 6th, 1872, and the infringement thereof by the defendants.

The answer of respondent sets up several defences:

1. That complainant and Lacey were not the original and first inventors of the article patented.
2. Want of novelty.
3. Want of utility.
4. A denial of the alleged infringement.

Replication was filed and proofs taken and the suit brought to hearing before the circuit court at the January term, 1874.

At the same term the court entered the following interlocutory decree and order of reference:

GEORGE B. CORNELL, Complainant,
vs.
EILERT SCHUMACHER AND WILLIAM JOHNSON,
Defendants.

This cause having been heretofore brought to a hearing upon the pleadings and proofs, and counsel for the parties respectively having been heard thereupon, and the same having been duly considered by the court, it is ordered, adjudged, and decreed as follows:

First. That the said letters-patent, on which this suit is brought, granted to said George B. Cornell, designated as reissue number 5,026, dated August 6th, 1872, (the original having been granted to said Cornell as assignee of himself and John B. Lacey, and dated August 29th, 1871,) are good and valid and still in force, and owned by the said complainant.

Second. That the defendants, Eilert Schumacher and William Johnson, have violated and infringed upon the said rights of the said complainant under the said reissued letters-patent, as in said bill set forth.

Third. That the said complainant is entitled to a discovery and account from the said defendants, Eilert Schumacher and William Johnson, of all gains and profits accruing to and realized by them from and in consequence of their aforesaid violation and infringement of the said letters-patent and the said rights of the complainant thereunder, and is entitled to recover from said defendants such gains and profits, and in addition thereto, the damages the complainant has sustained by such violation and infringement of his said rights. And it is further ordered that this cause be referred to Mr. Francis Bloodgood, one of the masters of this court, to compute and ascertain and to take

and state an account of all gains, profits, and advantages accruing to and realized and received by the said defendants by reason of the infringement of the said letters-patent and the complainant's rights thereunder; and in addition thereto, assess the damages sustained by the complainant by reason of said infringement to the date of the report. And the master is directed to take proofs upon the above-mentioned matters and to report the same, together with said account and assessment of damages, with all convenient speed. And he is authorized to require the production of the books of account of said defendants and to examine the defendants and others, on oath, touching the matters hereby referred to him. The proofs already taken in said cause or agreed to be used by stipulation therein may be used in said reference, and other testimony may be taken in accordance with the practice of the court, and under the rules thereof. And further directions are reserved until the coming in of said report.

Record, pp. 43, 44.

Under this order the master took proofs and reported the same to the court, which will be found in record from page 50 to 85, inclusive.

The master also stated an account of the gains and profits, also damages to complainant, as directed in the order.

This statement is as follows (Record, p. 87):

SCHEDULE A.

Statement of account of the gains and profits realized by the defendants from and in consequence of their infringement of complainant's letters-patent.

Profits of $1.50 each on sales of 16 wrenches (See Exhibit A).....	$24 00	
Profits of five cents each on sales of 59,622 bushes (See page 18 of testimony and Schedule A).....	2,981 00	
		$3,005 10

Assessment of damages complainant has sustained from said infringement in addition to the above.		
Profits which complainant *might have made* on sale of his bushes to Ph. Best & Co., if they had purchased of him instead of defendants, the 14,970 bushes which is shown in defendants' account to have been sold by them to Ph. Best & Co., 14,970 bushes sold at a profit of ten cents each	1,497 00	
Deduct the profits allowed by complainant on such sale in statement of account above	748 50	
Amount of damages assessed		748 50
Total amount of profits and damages.....		$3,753 60

FR. BLOODGOOD, *Master, &c.*

To this report respondents filed the following exceptions:

First exception.—For that it appears in and by said report and the Schedule A thereto annexed, that the said master in taking and stating the said accounts contained in said schedule has charged the said defendants with "profits of five cents each on sales of 59,622 bushes, amounting to the sum of $2,981.10," whereas it appears by the pleadings and proofs in this cause and by the proofs taken before the said master that said charge is erroneous and that no charge therefor should be made against the said defendants.

Second exception.—For that the said master, in taking and stating the accounts in the schedule marked "A," has debited and charged the said defendants $748.50 for damages sustained by complainant by infringement of his patent for "profits which complainant might have made on sales of his bushes to Ph. Best & Co., if they had purchased of him,

instead of defendants, the 14,970 bushes which is shown in defendants' account to have been sold by them to Ph. Best & Co.," whereas it appears, by the pleadings and proofs in this cause, and by the proofs taken before the said master, that said charge is erroneous and that no charge therefor should have been made against said defendants.

In all which respects the said defendants do except to the said master's said report, and humbly appeal therefrom to the judgment of this honorable court.

Record, p. 88.

These exceptions were overruled by the court, and a final decree entered "that the said defendants, Eilert Schumacher and William Johnson, do forthwith pay unto the said complainant, George B. Cornell, the sum of three thousand seven hundred and fifty-three dollars and sixty cents, being both the amount of profit found by the said master's report to have been received by the said defendants from the manufacture and sale of wrenches described in the said letters-patent, in violation of the exclusive rights of complainant secured to him by the letters-patent aforesaid, and the amount of damages sustained by the said complainant by reason of such unlawful manufacture and sale of such wrenches by said defendants."

Assignment of Errors.

The court erred —

1st. In decreeing that said letters-patent are good and valid.

2. That defendants had infringed said letters-patent.

3. In ordering the master to state an account of the gains and profits the defendants had realized and the damages complainant had sustained by reason of said alleged infringement.

4. The court erred in overruling respondents' exceptions to the master's report.

5. The court erred in that it ordered that the said master's report be confirmed.

6. The court erred in decreeing a perpetual injunction against said respondents.

7. The court erred in decreeing that said respondents should pay complainant the sum of three thousand seven hundred and fifty-three dollars and sixty cents and costs of suits.

Points and Authorities.

I.

The article patented by the complainant and his assignor, and for the infringement of which patent this suit is brought, is not a patentable invention within the laws of the United States.

"An article to be patentable must not only differ from others, but must also indicate, at least in some degree, an exercise of inventive genius."—(Bump's Law of Patents, p. 86, and cases cited.)

"A distinction must be drawn and maintained between invention and skill or good judgment."—(Ib., and cases cited.)

On page 39 we have drawings representing the Steifel wrench. Complainant says he used a wrench like the Steifel wrench "in the winter and spring of 1866; and I used it for quite a while in experimenting; tried to put bushes into bungholes with it. It was not satisfactory. The wrench would slip from notches before putting the bush home, and would leave under the flange space."

Record, p. 61, f. 139.

Complainant was experimenting with the Steifel wrench five years before the date of his original patent.

What change did he make in the Steifel wrench?

The Steifel wrench has two projections which engage the bush by fitting into holes or notches on opposite sides of the top of the bush. The complainant's wrench has two

projections which engage the bush by fitting one into a notch in the top of the bush and the other into the aperture of the bush. Did this change from a hole in the top of the bush to the aperture of the bush require inventive genius? Did it require a very remarkable degree of skill to apply one of the projections of the Steifel wrench to the aperture in the bush? Would it require anything more than ordinary good sense to make this application?

This court has said in a recent case: "Invention or discovery is the requirement which constitutes the foundation of the right to obtain a patent, and it was decided by this court more than a quarter of a century ago, that unless more ingenuity and skill were required in making or applying said improvement than are possessed by an ordinary mechanic acquainted with the business, there is an absence of that degree of skill and ingenuity which constitute the essential elements in every invention.

Dunbar vs. Myer, 4 Otto, 197.
Hunton vs. Mahon, 12 C. P., N. S., 450.
Ralston vs. Smith, 11 Clark H. L., 231.

If letters-patent had been issued to Steifel, can there be a doubt that the Cornell wrench, being subsequent in date, would be an infringement of it? That the fitting the projection into the aperture of the bush, instead of an aperture in the rim of the bush, would be held to be merely an evasion of the Steifel patent, a device within the skill of any ordinary mechanic.

The bush, as known in mechanics, has been used in just the way the complainant claims a monopoly upon from the earliest history of the arts.

Knight's American Mechanical Dictionary defines—

"Bush, (Fr. bouche, a mouth,) a bearing for a spindle or arbor, as in the case of the wooden chocks, called also followers, which surround the spindle within the eye of a bed-stone and form the upper bearing of the spindle; a piece of metal or wood inserted into a plate to receive the wear of a pivot or arbor; a thimble, or sleeve, or hollow socket

placed in a hole in a plate or block, and adapted to receive a spindle, gudgeon, or pivot; it forms a lining for a bearing socket; the collar of a lathe spindle is a bush." Here we have not merely a suggestion that the bush is adapted to receive the spindle or cylindrical core of complainant's wrench, but the fact that it is the purpose or object for which the bush is generally used in mechanics.

The axle to the wagon-wheel, the journal to the car-wheel, the arbor, the tenon, the pivot, the spindle, the mandrel may all be described as "cylindrical cores" so arranged as to fit in a bush or bushing (for they are all used with a bush) for the purpose of holding either the bush or some part of the machinery connected with it in place and preventing it from slipping from its seat.

Will the application of a method so old and in so common use to screwing bushes into beer barrels be classed an invention so meritorious in its character that the public shall not be permitted to use it for seventeen years, except by complainant's leave?

That which is within the skill of an ordinary mechanic is common property. To grant a monopoly of it is not "to promote the progress of science and useful arts," but retards science and prevents improvements in the useful arts, and is contrary to the Constitution.

Constitution, art. 1, sec. 8.

II.

The wrench made by defendants, and which is made under and in accordance with letters-patent issued to said defendants, for the manufacture and sale of which this suit is brought, is not an infringement of complainant's patent.

Complainant's patent will be found on pages 16, 17, 18, and 19 of record.

Respondents' patent on pages 42 and 43.

Complainant in his specification, in describing his invention, says:

"The present invention relates to a wrench employed in securing a metallic bung-bushing within the aperture of casks, barrels, &c.; and the improvement consists in providing the shank of the wrench with a cylindrical core, so arranged as to closely fit the aperture in the bushing, and a V-shaped projection adapted to fit a corresponding notch formed in the bushing, whereby the same may be turned into place without assuming an oblique position within the bung-opening, and also preventing the wrench from slipping from its seat; all of which will be more fully understood by the following description:

"In the drawing it represents the shank of the wrench, which consists of a plain metal bar of the requisite length. Attached to one end of this bar is a flat metal plate, B, which is provided at its centre with an elongated mortise, C, as shown in Fig. 1. This shank is so formed at its junction with the plate as to provide a V-shaped projection, D, the point of which extends forward toward the centre of the plate. E represents a cylindrical cast-metal core, which is made tapering, and so arranged as to fit the aperture in the bushing. This core is made separate from the plate, and is attached thereto by means of a bolt, F, which passes through the mortise formed in the plate, as shown in Fig. 2. The arrangement of this core is such as to admit of being removed from the bolt by removing the nut *e*, the object of which is to allow a core of greater diameter to be substituted when used in bushings of large size, provision being made for the elongation of the mortise in the plate for the moving of the bolt toward or from the projection D, which becomes necessary when cores of different sizes are used.

"In using the said invention the core is inserted into the opening through the bushing and turned until projection D falls into a notch formed in the bushing, which is adapted to fit the same; and by means of the core the bushing is kept steady and prevented from assuming an oblique position in the bung-opening while being turned into place, and by the contact of the projection within the notch, the wrench is prevented from slipping from its seat, thereby enabling the bushing to be readily turned into place."

We do not wish to confine ourselves exclusively to the V-shaped projection, as any form that will prevent the core from turning independent of the bushing will produce the same result.

Having thus described the said invention, we claim—

"The wrench herein described, consisting of a shank A, plate B, projection D, and core E, the said core adapted to fit the opening through the bushing, whereby the same is prevented from assuming an oblique position when being turned into place, substantially as described."

This claim, with a slight modification as to projection E, which is called core E, would answer very well for a claim for the Steifel wrench. In that we have the shank A, plate B, projection D, also projection E, adapted to fit into an opening made in the top of the bush, whereby the same is prevented from assuming an oblique position when being turning into place.

This is the purpose and object of the second projection on the Steifel wrench.

The complainant has slightly changed the arrangement by fitting this second projection into the opening in the bush instead of an opening in the top or rim of the bush.

In what have we infringed?

Complainant's patent is for a wrench made up of a combination of parts. It is this combination of parts that conconstitutes the patent. No one of these parts is claimed separate from the combination.

"If the subject-matter is the combination of any given number of things or processes or parts, no portion of the combination less than the whole can be considered at the same time as being also the subject-matter."

Curtis, sec. 249.
Prouty vs. Draper, 1 Story, 568, 572.
S. C., 16 Peters, 336.
Winans vs. Schenectady & Troy R. R., 2 Blatch., 279.

"There is no infringement of a patent for a combination unless all the essential parts of the combination are substantially imitated."

Bell vs. Daniels, 1 Fisher, 372.

Respondent's Device.

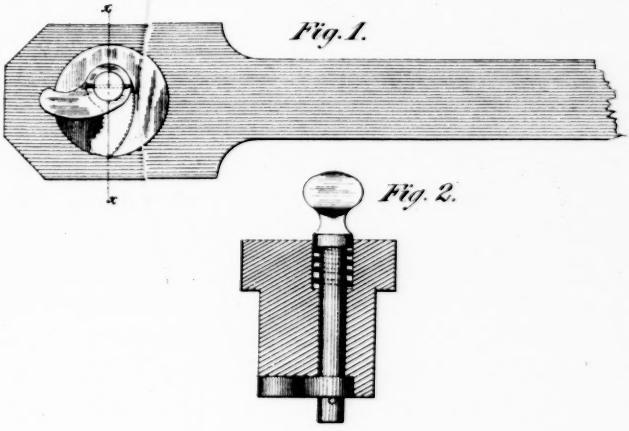
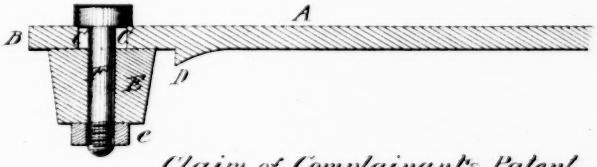


Fig. 1.

Fig. 2.

Complainant's Device.



Claim of Complainant's Patent

The combination of a shank A. plate B.
PROJECTION D *and core E.*

N.B. The projection D does not appear in the device of Respondent

This court, in Fuller vs. Yentzer, 4 Otto, 246, say: "Valid letters-patent undoubtedly may be granted for an invention which consists entirely in a new combination of old elements or ingredients, provided it appears that the new combination of the ingredients produces a new and useful result, but the rule is equally well settled that the invention in such a case consists merely in the new combination, and that a suit for infringement cannot be maintained against a party who constructs or uses a substantially different combination, even though it includes the exact same elements or ingredients, if the combination is in fact new and useful and substantially different from the one which preceded it."

See Gill vs. Hall, 22 Wall., 14.

"Such an invention, if it produces a new and useful result, is the proper subject of a patent, and such a patent is valid and operative; but the rights of the patentee under it differs in one respect from those of a patentee for an invention which consists of an entire machine, or of a new and useful device, as the rights of a patentee for a mere combination of old ingredients are not infringed, unless it appears that the alleged infringer made, used, or sold the entire combination."

Gould vs. Rees, 15 Wall., 194.
Prouty vs. Ruggles, 15 Peters, 341.
Vance vs. Campbell, 1 Black, 428.

The respondents have no use for and do not use the flat-plate B nor the elongated mortise C nor the V-shaped projection D, the point of which extends forward towards the center of the plate, nor the core made separate from the plate, nor the bolt F which passes through the mortise formed in the plate, as shown in Fig. 2; neither have the respondents any "arrangement of this core such as to admit of being removed from the bolt by removing the nut *e*, the object of which is to allow a core of greater diameter to be substituted when used in bushings of large size, provision being

made for the elongation of the mortise in the plate for the moving of the bolt towards or from the projection D, which becomes necessary when cores of different sizes are used."

This mortise and movable core is a very important feature in complainant's wrench, for unless the core is arranged at just the right distance from the projection D, so that it will fall into the notch in the rim of the bush, the wrench is entirely useless.

There is no notch in the bushing to which respondents' wrench applies.

It was found that the notch in the bush which was necessary for the use of complainant's wrench, it being the only means by which it engages the bush, so weakened the bush that when great force was used it was apt to break the bush. Still another practical difficulty with the bush on which complainant's wrench could be used was that the notch being upon the outside it was liable to be filled up, and the wrench could not be applied until the notch was cleaned out so that the V-shaped projection would engage the bush.

To obviate these difficulties the respondents made an improvement in the bush by dispensing with the notch, thereby leaving its strength unimpaired, and put a projection upon the lower on inside edge of the bush, which required new mechanism entirely different from anything found in complainant's wrench, to be of use.

To screw this new and improved bush into the barrel the respondents invented their wrench.

Their wrench has but one projection, that is inserted into the bush, it may be called a cone; through this cone runs a rod in a hole nearer one side than the other, with a latch on the end of the rod which fits into a recess in the bottom of the cone. When the cone is inserted into the bush the latch is turned by means of a knob at the top of the rod so as to catch against the lip or projection on the bottom of the bush, and the bush can be screwed to its place.

This court has said: "Results are not patentable; the established rule being that the invention, if any, within

the meaning of the patent act, consists in the means or apparatus by which the result is obtained, and not merely in the mode of operation independent of the mechanical devices employed."

Are not the differences pointed out sufficient to show that the mechanical devices employed by the respondents are substantially different from those employed by complainant? That respondents' wrench is substantially different in its construction and mode of operation from complainant's?

What room is there in this case for complainant to invoke the doctrine of mechanical equivalents?

When a defendant uses a different arrangement of parts, or a different device from that described in a patent, it is not sufficient, in order to make him an infringer, to prove that such arrangement or device is the mechanical equivalent or substitute of that described in the patent. But it must be proved, affirmatively, that the device or arrangement used by the defendant was, *at the date of the patent*, a known mechanical equivalent or substitute for the devices described in the patent. The authorities are clear to this point.

In Seymour vs. Osborne, 11 Wall., 516, 555–6, when the question arose how far the doctrine of equivalents could be invoked in the case of a combination patent, this court held, that the extent to which the inventor of a device, or of an entire machine, or of a mere combination, could invoke the aid of the doctrine of equivalents was the same, *except that a combination is not infringed*, unless by a machine containing all the material ingredients patented, *or proper substitutes*, for one or more of such ingredients, *well known to be such at the time the patent was granted*. The same rule has been frequently laid down in later cases in this court.

In Gould vs. Rees, 15 Wall., 187, 193, the court held the following language: "Unquestionably the withdrawal of one ingredient in a patented combination, and the substitution of another *which was well known at the date of the patent*

as a proper substitute for the one withdrawn, is a mere formal alteration of the combination."

"It is equally clear that if the combination constituting the invention claimed in the subsequent patent was new, *or if the ingredient substituted for the one withdrawn* was a newly *discovered one*, or even an old one performing some new function, *and was not known at the date of the plaintiff's patent as a proper substitute for the ingredient withdrawn*, it would avoid the infringement as a new combination, or a newly discovered ingredient substituted for the one omitted, or even an old one performing a new function not known at the date of the plaintiff's patent as a proper substitute for the one omitted, would not be an equivalent for the ingredient omitted within the meaning of the patent law, nor could it be successfully claimed as such by the plaintiff in order to support the charge of infringement."

The same doctrine was again declared by this court in Gill vs. Wells, 22 Wall., 1, 28, as follows: "The rule is that if the defendant omits entirely one of the ingredients of the plaintiff's combination, without substituting any other, he does not infringe, and, if he substitutes another in the place of the one omitted, which is new, or which performs a substantially different function, or even if it is old, *but was not known at the date of the plaintiff's patent as a proper substitute for the omitted ingredient, he does not infringe*. By an equivalent in such a case it is meant that the ingredient substituted for the one withdrawn performs the same function as the other, and *that it was well known at the date of the patent securing the invention as a proper substitute* for the one omitted in a patented combination."

"Hence it follows that a party who merely substitutes another old ingredient for one of the ingredients of a patented combination is an infringer, if the substitute performs the the same function as the ingredient for which it was substituted, and was well known at the date of the patent as a proper substitute for the omitted ingredient, but the rule is otherwise if the ingredient substituted was a new one, or

performed substantially a different function, *or was not known at the date of the plaintiff's patent as a proper substitute for the one omitted, as in that event he does not infringe.*"

Ibid., 28, 29.

No presumption exists that a combination, or any of the ingredients of a combination used by a defendant, and alleged to be an equivalent of that described in a complainant's patent was known to be such equivalent at the date of such patent, even though there may be proof that such combination or such ingredients thereof is at the time of such proof such an equivalent. But there must be made positive and satisfactory proof that the element or ingredient of the combination use by the defendant was, *at the date of the complainant's patent, a known equivalent* of that described in his patent.

And such proof must be made by the complainant or he cannot recover, however the fact may be.

This point has been directly held by his honor, Judge Shepley, circuit judge for the first circuit, in a case in the district of Massachusetts, decided by him in 1875.

In that case, which was a suit in equity for an alleged infringement of an extended patent for improvements in hoisting apparatus, the defendants used a means of automatic adjustment for equalizing the strain upon the series of ropes, different from that described in the patent. The patent set forth and described three means of accomplishing such a result, and the defendant used a means differing from either of those described in the patent, but such means was claimed by the complainant to be but the mechanical equivalent of those described in the patent. The court say:

"If the claim is valid, defendants are not proved to have infringed it, for there is no evidence in the record tending to show *that the contrivances used by the defendants were, at the date of the patent, known substitutes for either of the means of adjustment described in the patent.*

"And in the absence of such proofs, it was held that the claim could not be regarded as infringed."

Tufts vs. Bos. Mac. Co., 8 Off. Gaz., 239.

In the present case there has been no proof offered by the complainant tending to show that the devices used by the defendants, and claimed to be the equivalent of the devices described in his patent, were known to be such equivalents at the date of his said patent. Even admitting the correctness of the position thus assumed by the complainant, he is not entitled to recover against the defendants in this suit, because of the absence of such proof.

The evidence shows that instead of the contrivance used by the defendants, and which is claimed to be an equivalent for the V-shaped projection, being a substitute known at the date of the patent, that it is an ingenious invention constituted of an eccentric shaft and latch, which engages the bush at the bottom instead of the open slot at the top, answering a purpose, and performing a function, which, as to the bushes sold by the defendants, complainant's wrench cannot perform.

The witness Smith, one of the experts examined on behalf of the respondents, (page 27, record,) says: "The lever A of the complainant's wrench is constructed with a V which is applied to the top of the bung, and fits into a notch or recess in the rim of the bush that puts out over the stave of the barrel. The other (respondents' wrench) is constructed with a latch or shaft, passing down through the centre of a core, or the frustrum of a cone, with a latch on the bottom of the shaft that passes through the cone, which, when the cone is put into the bushing is turned in, and after it is put in there, is turned out so as to come in contact with a lip on the bottom of the bush, so that as the bush is turned by the wrench, it remains in a fixed position until the latch is turned back again, whilst with the other, or Cornell wrench, it has to be pressed down on the bush to keep it in position. The Cornell wrench can be taken off the bush without any change, but in the Schumacher & Johnson wrench it cannot be taken off until the latch is turned back by turning the shaft and moving the latch back into the recess in the cone."

Q. "Are there any other differences in the mode of construction of the two machines that now occur to you?"

Ans. "In the Cornell wrench the cone seems to be movable, and the cone held by a bolt and nut by which the frustrum of the cone can be moved up toward the projection V or back from it; but it appears to be firmly held in position as placed, whilst the Schumacher & Johnson cone is a fixture on the lever."

Johnson says, page 30: "They differ materially in device. In the complainant's wrench the power is all thrown on projection V on the wrench, none on the cone; the other wrench, the power is all applied on the latch against the cone. They are different in complicity of number of pieces; the Cornell wrench having four pieces, and ours put together with three."

Loeffelholz, respondents' witness, says, p. 31:

"I claim that the Schumacher & Johnson wrench is entirely different in construction from that of complainant. The notch on the projection on complainant's machine takes hold of the flange of the bush in order to screw in the bush, while the defendants' machine, with its eccentric movement, cannot be used unless the eccentric part is brought to the proper point by throwing the latch out. On account of this eccentric part here I am positive that this wrench is an entirely different wrench from that of complainant's. The defendants' wrench cannot be used on the complainant's bush, nor the complainant's wrench on the defendants' bush." The witness Hoare, on page 37, in answer to the question put by complainant's counsel on cross-examination, viz: Q. "When the wrench B is in use, does not the latch on brace R take the place of, and perform the same office as, the V-shaped projection does in the wrench?" Ans. "The only similarity at all would be in the purpose of screwing the bush home, which must be the same in all wrenches, however applied; but they are mechanically plainly different. The latch R does not take the place of the V-shaped projection."

These witnesses all concur that these wrenches differ in mechanical construction and mode of operation, and the only similarity between them is that they will screw the bush to its place. The complainant cannot claim a monopoly of all wrenches that can be used for that purpose.

But the test which seems to me conclusive, here is an improved bushing stronger than complainants, not so liable to break, smooth upon its surface, with an unbroken rim, and which the brewers prefer to any before in use. The complainant's wrench cannot be used to screw it in, for there is no notch in the rim for projection D to fall into in turning the wrench. It was that notch that spoiled the bushing. The projection D must be dispensed with, and without it complainant's wrench is of no use. It is one of the distinctive features of complainants' patent, quite as much so as the core. Something must be invented by which the wrench can be made to engage the bushing, and the respondents invented this device for which they have a patent. They certainly have not used the complainant's combination, neither have they substituted for a part of the combination a well-known equivalent.

III.

If complainant's patent is good and valid, and if defendants have infringed the same by the manufacture and sale of the wrenches made and sold by them, they can be held liable only for the profits and damages realized from the manufacture and sale of wrenches; and they cannot be held to account for profits realized from the sale of bushes, an article not included in complainant's patent, and on which he has no monopoly, and which complainant in his bill does not claim to be an infringement.

The master to whom this cause was referred, to state an account of the profits realized by the defendants from the infringement, and assess the damages to complainant, reports as follows, page 87 of record:

"*Statement of account of the gains and profits realized by defendants from and in consequence of their infringement of complainant's letters-patent.*

"Profits of $1.50 each on sales of 16 wrenches (see Exhibit A)	$24 00	
"Profits of five cents each on sales of 59,622 bushes	2,981 00	
		$3,005 10
"Assessment of damages complainant has sustained from said infringement in addition to the above.		
"Profits which complainant might have made on sales of his bushes to Ph. Best & Co., if they had purchased of him instead of defendants the 14,970 bushes, which is shown in defendants' account to have been sold by them to Ph. Best & Co., 14,970 bushes, sold at a profit of ten cents each	$1,497 00	
"Deduct the profits allowed by complainant on such sale in the statement of account above	748 50	
"Amount of damages assessed	$748 50	
"Total amount of profits and damages.		$3,753 60."

Complainant's patent is for a wrench, and nothing but a wrench. Complainant's bill is for an infringement of his patent wrench, and nothing more. When we discovered that the master had charged us not only with the profits made from the sale of the wrenches, but also with the profits made upon the sale of another and entirely distinct article of manufacture, no ways connected with the wrench, and no ways connected with the alleged infringement, we were surprised at the report, and believed then and believe now that it is entirely without precedent or authority. We excepted to the report, (page 88 of record,) but our excep-

tions were overruled and the report confirmed, and a decree entered against the defendants for the full amount reported by the master. It seems to us that the absurdity of the finding is so patent that we might safely rest this branch of our argument without note or comment on the master's theory or the court's ruling on profits and damages. But we refer to a few cases in support of our views on this question.

In Blake vs. Robertson, 4 Otto, 733, which was a bill filed for an infringement of a patent "for an improvement in machines for crushing stones," this court say: "The infringers made but four machines. No license fee charged by the complainant is shown. The burden of proof rests upon him. Damages must be proved; they are not to be presumed. The complainant made a profit of forty dollars an inch on the width of the jaws of the numerous machines he had sold. But inventions covered by other patents were embraced in those machines. It was not shown how much of the profit was due to those other patents, nor how much of it was manufacturer's profit. The complainant was, therefore entitled only to nominal damages. This the court gave him. It was all the state of the evidence warranted. It would have been error to give more." If it would have been error in that case for the court to have given the complainant any part of the profits realized from inventions covered by other patents, which were incorporated into the infringing machine, much more is it error for the court to give this complainant profits realized from an article not incorporated into or connected with the infringing machine. Judge Shepley says, in Graham vs. Mason, 1 Holmes, 89: "The complainants had no right to any portion of the profits which the defendants made upon the looms to which the infringing mechanism was attached," and this court in the same case on appeal go even farther and say, "manifestly the complainants are not entitled to savings on profits resulting from the defendants' own invention."

23 Wall., 277.

The bushes sold by defendants were defendants' own invention, and were an improvement upon bushes before in use, and because they were an improvement, and a better bush, the brewers bought them in preference to any other. Yet it is claimed, and the court below decreed, that defendant should account for and pay over to complainant the profits realized from the manufacture and sale of this bush of their own invention. In Hitchcock vs. Tremaine, 5 Fisher, 314, the court say: "Now it is only the profits arising from the sale of what is patented, that the complainant be allowed." Judge Sawyer, U. S. circuit judge, ninth circuit, in Carter vs. Baker, U. C. R., ninth circuit, 527, says: "The profits made by the defendants in selling the machines are proper to be given as a part of the damages; for the right to make and vend the patented machine being the plaintiffs' property, the profits resulting from the sale of it ought to belong to them. But as mere profits, the plaintiffs are only entitled to the profits of the sale of their machine as patented. If the defendants have improved their machine, and if any of the profits are properly credited to defendants' improvement, they do not belong to the plaintiffs."

"The plaintiffs are not entitled to recover, as a part of the damages, any loss sustained by reason of their inability to sell the Pfiel plows, or any other plows than those made under or embodying the patent infringed. Their profits must be the direct and legitimate fruits of that patent. * * I instruct you, therefore, that you will not include damages resulting from the dealings of the plaintiffs in other machines than those embodying the patent infringed."

Ibid., 529.

This court say, in Burdell et al. vs. Deering et al., 2 Otto, 719: "In cases where profits are the proper measure, it is the profits which the infringer makes, or ought to make, which govern, and not the profits which plaintiff can show that he might have made."

In Seymour vs. McCormick, 16 How., 490, this court say: "Where an inventor finds it profitable to exercise his monopoly by selling licenses to make or use his improvement, he has himself fixed the average of his actual damage, when his invention has been used without his license. If he claims anything above that amount, he is bound to substantiate his claim by clear and distinct evidence. When he has himself established the market value of his improvement, as separate and distinct from the other machinery with which it is connected, he can have no claim in justice or equity to make the profits of the whole machine the measure of his demand. * * Actual damages must be actually proved, and cannot be assumed as a legal inference from any facts which amount not to actual proof of the facts. What a patentee 'would have made, if the infringer had not interfered with his rights,' is a question of fact, and not a judgment of law. The question is not what speculatively he may have lost, but what actually he did lose. It is not a 'judgment of law,' or necessary legal inference, that if all the manufacturers of steam-engines and locomotives, who have built and sold engines with a patent cut-off, or steam-whistle, had not made such engines, that, therefore, all the purchasers of engines would have employed the patentee of the cut-off or whistle; and that, consequently, such patentee is entitled to all the profits made in the manufacture of such steam-engines by those who may have used his improvement without his license. Such a rule of damages would be better entitled to the epithet of 'speculative,' 'imaginary,' or 'fanciful,' than that of 'actual.'"

The complainant in this case has himself established the market value of his wrench. On page 70 of the record he testifies that he sold his wrenches at the price of $3.00, and that it cost to manufacture them from $1.50 to $2.00; and the master reports that defendants have made and sold sixteen, and charges defendants with the profits thereon, at $24.00. This is all that the complainant can claim in justice or equity for the manufacture and sale of the wrench.

Applying the rule in suits in equity, that the infringer is regarded as the trustee of the owner of the patent as respects the gains and profits realized from the manufacture and sale of complainant's wrench, this is all he is entitled to recover. The defendants did not use the wrench. The infringement consisted entirely in the manufacture and sale. But complainant claims that defendants realized a collateral profit; that by the sale of the wrench they were enabled to sell with it another article of merchandise—a bush to be used in casks or barrels. We submit that no case can be found carrying the doctrine of trusts in patent cases so far.

As to the damages assessed by the master, profits which the complainant might have made on sale of his bushes to Ph. Best & Co., if they had purchased of him instead of defendants, the 14,970 bushes which is shown in defendants' account to have been sold by them to Ph. Best & Co., at ten cents each, amounting to $1,497, in the language of Judge Grier, in Seymour vs. McCormick, they are better entitled to the epithet of "speculative," "imaginary," or "fanciful," than that of "actual." In this case they are purely fanciful, for there is not one word of proof tending to show that complainant could have sold his bushes to Ph. Best & Co., if defendants had not sold theirs.

1. We believe that we have demonstrated that complainant's patent is not valid.

2. That defendants are not infringers; and,

3. That the damages adjudged against the defendants are erroneous.

We, therefore, ask that the decree be reversed.

W. P. LYNDE,
Of Counsel.

BRIEF FOR APPELLEE.

Supreme Court of the U. S.

No. 197.

EILERT SCHUMACKER, and WILLIAM JOHNSON,
APPELLANTS,
vs.
GEORGE B. CORNELL,
IN EQUITY.

Appeal from the Circuit Court for the Eastern District of Wisconsin.

Supreme Court of the U. S.

EILERT SCHUMACKER and WILLIAM JOHNSON, Appellants,

vs.

GEORGE B. CORNELL,)

In Equity.

Appeal from the Circuit Court for the Eastern District of Wisconsin.

Our understanding of the nature of this appeal is, that while it involves the validity of the patent, it is in the main taken upon questions involved in the award of damages. As the validity of the patent must appear before compensation or damages of any kind can be found, this branch of the case will be first considered.

VALIDITY.

Suit was originally brought upon the Reissued Patent, No. 5,026, dated August 6, 1872. Said patent being a reissue of original Patent. No. 118,617, granted to Cornell & Lacy,

August 29, 1871, for certain improvements in wrenches for inserting and extracting bung bushes.

The claim is, " *The wrench herein described, consisting* of " a shank, A, plate, B, projection, D, and core, E, the said core " adapted to fit the opening through the bushing, whereby the " same is prevented from assuming an oblique position when " being turned into place, substantially as described."

This seems clearly to be a claim for the wrench described consisting of certain features, of which the shank, A, and plate, B, are a single piece forming the handle and base of the core or cone, or interior support and guide for the bush; the center core, E, and the projection or engaging point, D. In reference to the method of making the engagement between the wrench and the bush, the only place where variation could be made without destroying the wrench, it is recited in the patent that: "We do not wish to confine ourselves exclusively " to the V shaped projections, *as any form that will prevent the* " *core from turning independent from the bushing*, will produce " the same result," See Record pp. 18, 19. Or in other words, we claim to have invented a new tool consisting of the enumerated parts, two of which,--the handle, and the core, are essential, while the third--the engaging point, may be varied at pleasure, provided one feature is retained, that of making the bush turn with the core.

If, however, it should be considered that the claim is for a combination, then it will be found that it is needlessly put as a combination of four elements as the "shank, A" and "plate, B" are a single piece of metal without any office or function requiring any line or mark between them, the claim, when considered as a combination, will therefore be treated as one of

three elements,to-wit: a handle, a central supporting core, and an engaging point.

Even as a combination, the claim clearly falls within the rule that an inventor shall not suffer from an ill drawn specification, or claim, provided that the invention can be distinctly made out from the whole taken together. See on this subject, Curtis on Patents, §§ 231, 234a.

It may be remarked in passing that it is not of any special importance whether the handle is considered as one or as two elements of the claim, as the appellants' handle is the same in this respect; and that the "shank" and "plate" have in all cases been considered by the witnesses, simply as a lever handle in both the wrenches; and the Cornell wrench will be found to be the first wrench, in this art, having its handle all on one side, forming a powerful lever.

The standing defense to a reissue patent, that it is not for the same invention as that described in the original patent is not made in this case, and the original patent is not exhibited. We are therefore relieved from any questions of this character, as the patent stands with the same force as the original.

NOVELTY.

The novelty of the invention is but slightly attacked, and we think a consideration of the answering matter will tend only to bring the novelty of the invention into bolder relief. The wrench produced by the inventors is a new one. All the older wrenches have only two parts of the patented wrench, to-wit: a handle, and one or more engaging points. No one of them has the central supporting core or cone, for guiding and supporting cylindrical or hollow screws. This is the new part,

and the valuable part; and its application to the wrench makes a new tool of it. A special tool for a special purpose, and the first of its kind in the art.

The art as shown does not exhibit a wrench prior to the Cornell wrench, having a device of any kind by which the hollow of the screw is filled by the wrench, so that such cylindrical or hollow screw can be inserted in place as though the screw was of itself a part of the wrench, or solid.

This new wrench, or wrench with the new features is of great value in the art, for the reasons: 1st, it forms a guide by which the direction of the screw is controlled; this is important for bung bushings as no female thread is cut in the staves. 2d, it preserves the cylindrical form of the hollow screw; this is important in a screw lining for an opening in wood, as it is well known that wood yields much more readily sidewise than endwise of the fibre, so that without the central support the bushes or linings are liable to become oval or so out of shape that the bungs will not fit; and 3d, it preserves the bushes, for when held to a perfect circle they are less liable to break while being inserted, and less liable to be broken, when bungs are driven into them in use; and a 4th might be added, which is that much greater power can be applied to insert the bushes. The power applied ordinarily to the bush in inserting is about a ton. (Cornell. p. 68). A power, as anyone can understand, that cannot be applied by any sharp or thin edged tool, or to the edges of the linings with safety when they are unsupported: the core also prevents the wrench from slipping out, or rolling over when the strong power is applied.

The only wrench exhibited is the Stiefel wrench, which has only the two old parts, the handle, and the engaging points; it wholly lacks the new feature or part, the core, or cone fur-

nishing the interior support, and it may therefore be dropped without even considering the question as to whether in fact the Cornell wrench is, as it is claimed to be, the older wrench of the two.

The Calhoun Patent is clearly later than the Cornell and Lacy invention, as their invention was in the main completed in 1866. See Cornell pp. 61, 90. This Calhoun patent does not show or describe any wrench at all, and the bushing shown requires a flat or screw-driver wrench for its insertion.

Cornell's affidavit p. 90, explains his statement on p. 24.

INFRINGEMENT.

Appellants' wrench is nearly a perfect copy of the patented one. It has a side handle; a central supporting core; and an engaging point. The first two parts—the handle and central core are alike in both, the third—the old part common to all wrenches—is changed somewhat, that is, it is transferred from the top of the bush and contact with the handle, to the bottom of the bush and contact with the cone; but, in this changed relation it does not perform any different or further office than is performed by the engaging point of the appellee's wrench. The enumerated parts, the operation, and the result, are the same in both wrenches.

The appellants have exhibited a patent to one of them, for the latch engagement though it is not named in the answer, nor the wrench made, there claimed to be of their invention. An attempt will doubtless be made to bring the case at bar, within the rule frequently laid down by this Honorable Court; that where an invention consists in a new combination *of all old elements*, the substitution of a newly invented element for an

old one, would avoid an infringement; but all of these decisions have been carefully limited to combinations of "*all old elements*," and they do not therefore apply to this case, as the sole value of the appellee's patent lies in the newly invented part, the central supporting core, which appellants have appropriated bodily and without change. If the patent shall be held to be one for a combination, then the new element makes the patent one for a combination of elements, partly old and partly new; so that it is not for a combination of "all old" elements. This Honorable Court has restricted the scope of its decisions, recognizing by anticipation the injustice of allowing one to appropriate a newly discovered element or device, by inventing some change in one of the old ones. See on this subject, Curtis on Patents § 332.

Blanchard vs. Biers, 2 Blatchford 418, and Curtis on Patents, 4th Ed., p. 394, where this case is considered.

In Sewall vs. Jones, 1 Otto 183, this Court held as follows: "To infringe a patent, it is not necessary that the thing pat-"ented should be adopted in every particular. If the patent "is adopted substantially by the defendants, they are guilty of "infringement;" and there cited Root vs. Ball, 4th McLain, 177; Alden vs. Dewey, 1 Story C. C. 336.

Tested by this rule, or by any equitable rule, the appellants' wrench will be found to contain the patented combinations, to-wit: a shank or handle, a central supporting core, and a point for engaging the wrench with the bush when surrounding the core, so that it is guided, supported, and capable of receiving the strong power, necessary to force it home without a female thread.

That the two wrenches are essentially alike. See:

Sherburne, p. 15, Ints. 7 and 8.
Smith, p. 28, 1st Cr. Ques.
Loeffelhotz, p. 31, 1st Cr. Ques.

It is evident from the specification that the patentees did not, and did not intend to limit themselves to precise forms.

There are certain principles, well settled by an unbroken current of authority in the patent law, which control in construeing a patent. It is to be so construed, if it can be done, without doing violence to the language used, as to make it co-extensive with the invention actually made. If, by an examination of the specification, and applying to it the then existing state of the art, it can be learned what the invention was, the claim will be construed commensurate with the invention actually made; and this, by attending to what is new and what is old, "to the fact of whether the principle, which the patentee "has employed, had been discovered and applied before, and, "therefore, that he could have invented only a new form of "the application, or whether he has invented the appli-"cation of the principle itself, and, consequently, is entitled, if "he has not restricted himself, to claim the same application "of the same principle, under other forms or dimensions, or "by other means than those which he has specifically "described."

Curtis on Patents, 4th Ed., §§ 453, 454, 455, 456, 457, 458 and notes.

Hazworth vs. Hardcastle, Webster 484, 485.
Ransom vs. Mayor, &c., 1 Fisher, 252.
Whipple vs. Med. Co., 4 Fisher, 41.
Winans vs. Denmead, 15 Howard 341, 342, 343.

DAMAGES.

This case affords another illustration of the difficulty of determining any rule in advance, for the measurement of damages, as stated by this Honorable Court, in Seymour vs. McCormick, 16 Howard, on p. 489. And it shows that each case must, while governed by general principles, be largely determined by its own peculiar surroundings and position in the art.

It is admitted that there are difficulties in the case, and the most of them peculiar to it, and while one minor dictum of the Master cannot on principle be sustained, we think that it will be found, that while some of the reasoning may be bad, the general award or allowance, will be found to be substantially correct and below rather than above the amount properly due, and that it is fully justified by the proofs.

It appears from the art as shown in the record, that the patented tool is new; that its novelty and value, largely consists in the introduction of the new part—the supporting core; and that the product of all of the parts is a new special tool, for the special purpose of accurately inserting hollow screws, or bung linings, or as they are commonly designated "bushes," and so strongly inserting them, that no liquids or gasses can escape between the metal and the wood.

The use of this new tool is quite limited by reason of its being a special tool, for a special purpose, therefore the infringement is a special hardship. Its use is not only limited by its not being a tool for general use, but it is also limited by its own wearing qualities or endurance, as one wrench will last a lifetime, and will insert at least 100,000 bushes without repairing.

Cornell. p. 67. Wagner, p. 83.

Owing to this limited use, the patent has been held as a monopoly patent; that is, no licenses have been granted under it, or rights sold under or to the patent.

Cornell, p. 71.

Having ascertained the relation of the wrench to the art, and found that it is new; also its position in the trade, that the owner of the patent has elected to retain the exclusive use thereof, we can easily determine that this case does not belong to the class in which the compensation can be ascertained by license fees or royalties, and that it does belong to that class of cases usually denominated as monopoly patents.

In the case of no license, or monopoly patents, the usual measure by which the damages are ascertained, is the gains and profits made by the infringer by the use of the patented invention, as compared with what he or the public had a right to use.

This rule is subject to exceptions and cannot be used in this case for the reasons: first, there is no older art in this special line, by which the initial or starting point can be had. Second, the infringement of this patent enabled the appellants to maintain another branch of the business, by which great gains were made by them, and greater damages inflicted upon the business of the appellee; and third, that the infringing wrenches were largely given away in order to enable them to compete in the manufacture of bushes.

This case, therefore, falls more nearly within the rule laid down in Suffolk Co. vs. Hayden, 3 Wall., 315. Pocket Co. vs. Sickles, 19 Wall., 611, that when no license fee has been established, the damages are to go on general evidence.

Owing to the peculiarities of the case, the Master (p. 44)

was directed in and by the interlocutory decree to compute and ascertain "an account of all gains, profits, and advantages," &c., "and in addition thereto, assess the damages sustained by the Complainant by reason of said infringement," &c., under Section 4921, of the Revised Statutes.

It appears from the testimony of W. J. Schumacker, Appellant's book-keeper, p. 54, and his Exhibit B, p. 84, that seventeen wrenches were made *and sold*, and that his Exhibit B, does not show the wrenches that were given away. The number given away does not definitely appear. E. Schumacker, pp. 51, 52, says that some were given away. E. J. Schumacker, p. 55, states that each party, named in Exhibit B, had one. Nine different parties are there named as having bushes, to whom there is no wrench charged. E. Schumacker, p. 51, mentions three others whose names do not appear on Exhibit B. Johnson, one of the appellants, p. 57, says that they disposed of "from 35 to 45 in all." The average of this would be forty, and that is undoubtedly about the correct number. Some confused statements in reference to the number are found in the record, but they are easily accounted for by the questions and objections put of record by counsel for appellants, who persisted in attempting to make a stop at the date of filing the Bill, instead of the date of the interlocutory decree, as directed therein, or by the rules of equity practice. *Rubber Co. vs. Goodyear*, 9 Wall., 788.

We have by the proofs, then, ascertained the number of wrenches, as follows:

Made and sold, - - - - -	17
Made and given away, - - - -	23—40

Cornell, pp. 60, 61, states the value of wrenches to be sold

and used separately and independently, at one hundred dollars each, and says that he would not sell one for less than that price, if his bushes were not to be used.

There is no contradiction of this estimate or testimony, and this would bring the amount to $4,000.

Cornell also states (bottom of p. 61) that his damages by reason of the acts of appellants, are not less than $15,000.

The record shows that Cornell was engaged in dealing in wrenches and bushes, that having no factory of his own, he made a contract with the appellants, Exhibit A, p. 83, in January, 1872, for the manufacture of 100,000 bushes; which contract is not yet completed. See

W. J. Schumacker, p. 74.

Cornell, pp. 64, 65.

That appellants commenced the manufacture of bushes on their own account, and got up the infringing wrench in order to sell them, and did sell them to Cornell's customers, and that in order to do so, they reduced the prices.

The infringement by appellants was deliberate, willful and malicious, and if there was ever a case that justified triple damages, this is one.

Cornell, p. 61, says that he was damaged, "by the defend-
"fendant's soliciting my customers, and receiving orders that
"were intended for me, and kept them, and filled them them-
"selves; and cutting the prices down in order to sell their
"bushes, and giving wrenches to hold out inducements to par-
"ties to take bushes, and by commencing to manufacture and
"sell their make of bush before they had completed (their)
"contract with me."

It is upon this statement, and the detailed facts given after-

wards, in support of it, that Cornell bases his estimates of $15,000 damages. A portion of the causes of damage enumerated cannot be properly considered in this suit, as they belong partly to the contract, and partly to the bushes, but if we deduct, say two-thirds on these accounts, we still have $5,000 left, a sum greater than that found by the Master.

All of this class of testimony goes to show the animus and bad faith of the appellants, and a large portion of their testimony before the Master, is made up of their attempts to explain and gloss it over, as will be seen by its perusal.

THE MASTER'S REPORT.

So far as the receipts and profits for wrenches actually sold is concerned, the report is practically correct; the profit on some is more than the amount stated, and there was one more sold than is included; but the variation is too insignificant to pay for investigation.

It appears from the record that appellee has a patent for the bush (p. 20, Complainant's Exhibit D.) but it is contended by appellants that it does not cover the bush manufactured by them.

E. Schumacker, p. 51.

For the purpose of this suit, it is immaterial whether the bush is patented or not, and it may now be assumed that Schumacker is right, as there is no evidence to the contrary. The Master among other things, found that "The defendant's *sole ob-* "*ject* in such infringement, was to secure the profits upon the sale of bushes, *which the infringing wrench was to be used in insert-* "*ing*." That, "without making and and selling these wrenches,

" the defendants would have had no sale for their bushes * *
" Their bushes could only be inserted by their wrench, and
" were valueless without it. The manufacture and sale of the
" infringing wrench created the market for the defendant's
" bushes."

That, " the profits on the manufacture and sale of these
" bushes by the defendants are material facts to be considered
" on this reference in determining the amount of the defend-
" ant's *gains directly accruing from the manufacture and sale of*
" *their infringement upon the Complainant's wrench.*" He considers these facts " under the peculiar circumstances of this case."

The record fully justifies these findings of the Master, and the extent to which they are to be considered is the only difficult question in this branch of the case. Its consideration may be avoided by takisg either of the other estimates found in the record, to-wit: the value of $100 for each wrench, or the gross damage of $15,000 divided by three; but in order that the Court may be to some extent aided in its consideration, if deemed necessary, the following is added:

The value of the bush does not lie in the profit from its manufacture, but in the saving of the cask from leakage, and in adding to the life of the " bung stave," which, with the bush, lasts the life of the cask, while without it such stave has to be renewed from one to three times a year, at a cost of from seventy-five cents to one dollar per annum. (See Cornell, bottom of p. 67, top of p. 68.)

The Master further found: " that the Complainant did not
" exercise his monopoly by establishing a market price for his
" patent wrench *separate and distinct from the bushes with which*

"*it was to be used*; but by disposing of it in connection therewith, and deriving his profits from such joint sales, as if the "two formed parts of one machine."

The evidence shows the correctness of these conclusions, and in view of the facts, that a majority of the wrenches were given away for the pupose of selling bushes; that the wrench was the key to the whole business; that without the wrench the bush business had therefore been a failure; that by means of the wrench, Cornell had succeeded in making a market for both, and of the great number of bushes that can be inserted by one wrench, it would seem that in equity the dealings in bushes are entitled to some consideration, and that the compensation or damages for the twenty-three wrenches given away for the purpose of selling bushes, cannot be practically got at in any other way. That the dealings in bushes, as found by the Master, and the Court below, "are material facts to be con- "sidered on this reference, in determining the amount of de- "fendant's gains directly accruing from the manufacture and "sale of their infringement upon the Complainant's wrench."

It is admitted that the consideration of this bush branch of the business cannot be carried so far as to be a bar to a recovery in a suit upon a patent for the bush.

The only figure that it cuts here, is that in its use the bush has become a measure for the profit and value of the wrench. The Master's dictum on this point is not legally sound, but it is suggested that while it may, be bad law, the general finding upon the facts is substantially correct, and that the appellants have not been damaged or injured thereby.

It is insisted on as a fact, that appellants could not have sold a single bush without the wrench, except to Cornell's cus-

tomers who had wrenches, and they gave away wrenches to Cornell's largest customers to get away his trade in both. Schedule or Exhibit A, p. 84, shows that of the 39,380, bushes there reported, 31,320 went to four of Cornell's customers, as follows: Schlitz, 13,820, Best & Co., 9,000, V. Blatz, 5,000, Miller, 3,500. No wrenches are charged to either of these parties, and W. J. Schumacker, p. 55, says that all parties having bushes necessarily had wrenches, and that where no wrenches are charged they were given away; and E. Schumacker, p. 51, admits that Best, Schlitz, Blatz and Miller had wrenches. So that by giving away four wrenches they were enabled to sell 31,320 bushes when they could not have sold one without the gift, or sale of a wrench. The balance of the bushes, 8,060 shown by Exhibit B, were also disposed of by a like gift or sale of wrenches. The books of appellants show sales of 59,622 bushes in all, ar 20,242 more than are shown in the schedule, or Exhibit B.

See Schedule B, p. 84.

W. J. Schumacker, p. 56.

The account stated by the Master, leaves appellants with their manufacturing psofits for the bushes, and only charges them with such profit as Cornell would have made after paying them their price for manufacturing.

Of the brushes sold to Best & Co., the number reported by the Master appears greater than that shown in Schedule B, as that only shows 9,000, but the proofs of loss of orders is as clear and full in reference to Schlits and Miller, as it is to Best & Co., so that the number found by the Master should have been 26,320, instead of 14,970, and the amount of $1,316, instead of $748.50; which would make the gross amount $4,321.10, or $567.50 more than found by him, thus showing

that by whatsoever process the problem is solved, a less amount has been found due appellee than the proofs gave him, which are:

Value, per wrench, 40 at $100 each,	$4,000.00
Damage proven, after deducting errors,	5,000.00
By the Master's basis and mode,	4,321.10

Judgment, $3,753.60.

It thus appears that the judgment is not up to the proofs, upon any theory or mode of computation that can be adopted and that appellants have no cause for complaint as to the size or amount of the judgment, and more especially so, as there is but little doubt that Cornell's estimate that appellants have, by their acts in this matter, damaged him and his business, over $15,000, is considerably under his actual damage in both branches of the business.

There was no opinion delivered by the Court in either branch of the case, but our understanding is, that the Court below, in considering the difficulties surrounding the case, from the fact that a majority of the infringing wrenches had been given away by the appellants in order to establish a competing business, and in view of all of the circumstances and of the undeterminable line between the two branches of the business, came to the conclusion, that the Master had it about as near right as it was possible to get it, and therefore overruled all exceptions, and confirmed the report.

An opinion by Judge Drummond was delivered in a later case, and published in the *Chicago Legal News*, Vol. IX, No. 18, January 20, 1877. It is printed at the end of the brief, as the original may not be readily accessible. This Opinion covers the two patents 5,026—the wrench patent—and 5,027—the bush patent; and in those cases the defendant's wrench was not

the same as appellants' wrench, as it operated by an expansion core and had no positive engaging point; it had only the frictional contact caused by the expansion. In this respect the Downer & Bemis is like the Littlejohn wrench in the case reported in V. 9, Patent Office Official Gazette, p. 837, and re-reported on p. 922, with a new syllabus. Neither of these cases are in point, so far as the appellant's wrench is concerned, and Judge Drummond's decision is furnished as an offset to Judge Johnson's; Judge Drummond's having been delivered after a regular hearing, on full proofs, and Judge Johnson's on affidavits in a motion for a preliminary injunction. Judge Drummond's decision is also the latest, and the opinion was delivered after able arguments in favor of the decision reported in the Official Gazette.

L. L. BOND,
FOR APPELLEE.

OPINION.

[*From the Chicago Legal News, Jan. 20, 1877, p. 142.*]

NOTE.—In reading this case, it will be borne in mind that that the defendant's wrench had an expanding core which engaged with the bush in the inside, and had no projection making a positive engagement at any particular point. The engagement was by interior friction, and the corresponding bush had no notch in the rim, or projection of any kind.—L. L. B.

UNITED STATES CIRCUIT COURT, NORTHERN DISTRICT OF ILLINOIS.

GEORGE B. CORNELL *vs.* THE DOWNER & BEMIS BREWING COMPANY AND HENRY N. BEMIS.

SAME *vs.* AMERICAN BUSH CO., AND GEO. W. GILLETT.

IN CHANCERY.

Patent Case—What will be considered an Infringement.

The bill in these cases was filed upon the Re-issues A and B of the original patent of Lacy and Cornell, of August 29, 1871, for an Improvement in Bushes and Wrenches for their insertion in beer barrels. Re-issue dated August 6, 1872.

(The claims are here repeated in the Legal News).

A motion was made on the first bill, and affidavits in support and opposed, and after full argument, an order was entered

February 4, 1875, for a preliminary injunction, *nisi*, etc., and the causes were brought to argument on pleadings and proofs, in May, 1876.

OPINION.

DRUMMOND, J.—In this case, every thing must depend on the construction which shall be given to the patents which have been re-issued to the plaintiff. If the true construction is that contended for by the defendant, then it can hardly be said that defendants have infringed. I do not propose to consider these patents separate from each other, but, really, as constituting together substantially one patent, to accomplish a particular purpose. To be sure, there are two patents issued, and two claims made by Lacy and Cornell, but they were issued at the same time, (the re-issues,) and they refer to the same common object. If this were a suit upon the bung bush alone, without reference to the wrench, the Court might possibly be dispose to take a different view of the matter; but, looking at both together as, in a certain sense, one conjoint patent, consisting of several parts, the question is, what is the true construction of the reissue patents? Is it so narrow as that contended for by the defendants? I hardly think that it is. It seems to me that the object was to make a bush of a particular kind, possessing certain attributes; and secondly, at the same time, to make a wrench which could be applied to the bush in a particular way, so as to insert it in a cask or barrel. The qualities of the bush were, that it was to be metallic, with a screw on the outside, smooth on the inside, tapering both outside and in, and with a flange to press on the stave of the cask, and a device for the "engagement" of the wrench with it, by means of which it was to be inserted in the barrel. The wrench

had a handle, its other end expanded or flatened out, and a device attached to it by which it could be engaged in the bush, and it was to possess a core which was to be inserted in the hole of the bush, and into which, when the bush was screwed in the barrel or cask, a wooden plug or bung could be driven. Now, the question is, whether or not this was a patentable invention, and how far the invention extends. There can be no doubt, I think, that it was a patentable invention. If it be true that there were bung bushes manufactured of metal, and with a screw outside, and a flange, which was to rest upon the stave of the barrel, there does not seem to have been a bush constructed like that of the plaintiff's, and which was to be inserted into the barrel by the same device or apparatus as his, viz: by a wrench with a shank, and a device to engage with the bush, and with a core constituting a part of the wrench which was to fit into the hole in the bush, and so, by the operation of revolving the bush in the barrel, to be inserted firmly, so as to make it tight, and in such away that the operator had complete control of the bush by means of a wrench, and pressing equally on all sides of the bush, one of the objects being to remove the core and insert a different sized one, when necessary, corresponding to the size of the bung bush.

I think, therefore, it is a patentable invention. As I understand, there never had been, before it was discovered by these parties, a bung bush with a wrench, such as are described in these patents. The core, taking it altogether, seems to be an essential element of the device, and is one of the principal objects, and I should think, also, one of the principal excellencies of the whole device, because it enables the operator, in inserting the bush into the cask, to command completely the act of insertion. I agree with the counsel of the defendants, that the

V-shaped device in the bush, and the corresponding device in the wrench, are essential parts of the invention of the plaintiff and Lacey; but while that is so, the question is, whether or not the plaintiff is restricted to the precise form in which the patent has set forth the device.

Now, this is the form (Complainant's Exhibit 1) in which it is set forth in the patent, as I understand. This is the V-shaped device in the bush, and there is a corresponding one in the wrench, where the bush is to be inserted, so that they engage together, and in this way the bush is inserted in the cask. While this is an essential part of the device, is the plaintiff limited to that precise form? If he is not, then I suppose it may be admitted that the defendants do not in that particular infringe; because that identical form is not used by the defendants. A change is made, but the bush is used substantially, as well as the wrench, and the core, and another method is adopted by which the engagement takes place between the wrench and the bush, so as to hold the bush fast while it is being inserted in the barrel. The main difficulty of this part of the case has been in reference to the paticular device of the plaintiff. It is said in the patent: "We do not wish to confine ourselves exclusively to the V-shaped projection, as any form that will prevent the core from turning, independent of the bush, will produce the same result." They are not to be confined to mere form, but any other form substantially like that, although there may be a change, would be within the terms of the patent. I have come to the conclusion, after some hesitation, that considering the core was a very essential part of the mode of inserting the bush, and one of the objects which the inventor had in view, was to enable the wrench, and the core as a part of it, to engage with the bush so as to firmly turn the bush in the

act of insertion; that the mere change in this method of engagement, although varied in different ways, does not prevent the infringement of the substantial part of the plaintiff's device It is often very difficult in patent cases to determine extent of the invention. Where there is a slight change in the machine, by which a new result is brought about, and which might be the subject of a patent, courts do not feel inclined to extend the invention beyond the mere change, although they may be inclined to sustain the patent; but where something elementary, so to speak, is discovered, and constitutes fairly a part of the invention of the patentee, then I do not think that any other inventor or manufacturer ought to be permitted to use that elementary part without paying tribute to the first inventor or originator. Such I regard the core in this case. I think that belongs to the plaintiff, and that it is not right or just for any one else to use it without his consent. What I mean is, that the defendants are prevented from using such an arrangement with the core in it, so as to engage it with the bush of the plaintiff, and by which, if done, there is an infringement of the plaintiff's patents.

Decree entered for plaintiff with reference to Bishop Master to assess damages, and perpetual injunction."